DOCUMENT RESUME

ED 125 222 88 EC 090 490

AUTHOR Burger, Robert M.; Proger, Barton B.
TITLE Curricular Reorganization of T.M.R. Classes. Termination Report, Title III Project, June 15, 1972 - June 14, 1975.
INSTITUTION Montgomery County Intermediate Unit 23, Blue Bell, Pa.
SPONS AGENCY Bureau of Elementary and Secondary Education (DHEW/OE), Washington, D.C.
REPORT NO 72021H-46
PUB DATE Jun 76
NOTE 178p.; Best Available Copy

EDRS PRICE MF-$0.83 HC-$10.03 Plus Postage.
DESCRIPTORS *Criterion Referenced Tests; *Curriculum Development; *Curriculum Evaluation; Elementary Secondary Education; Exceptional Child Research; Language Development; Mentally Handicapped; Number Concepts; Prevocational Education; Program Descriptions; Self Care Skills; *Trainable Mentally Handicapped
IDENTIFIERS Elementary Secondary Education Act Title III; ESEA Title III; *Final Reports

ABSTRACT

Described in the final report is a project designed to develop, field-test, and disseminate a dual, compatible system of curriculum and criterion-referenced evaluation based on a sample of 40 trainable mentally retarded students (5-15 years old) in self help, basic language, number, and prevocational skills. Program summary information includes a review of evaluation procedures, formal research and evaluation findings, project outcomes, concrete project outputs, and dissemination activities. The bulk of the document is comprised of 13 appendixes, including sample pages from the training skills program, sample material from the academics program, a summary of the prevocational curriculum and testing procedures, and a description of a followup project on employment for the trainable mentally retarded. (CL)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED125222

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

TERMINATION REPORT

TITLE III PROJECT

CURRICULAR REORGANIZATION OF T.M.R. CLASSES

(PROJECT NUMBER 72021H-46)

(June 15, 1972, to June 14, 1975)

by

Robert M. Burger, Ph. D.

and

Barton B. Proger, Ed.D.

BEST COPY AVAILABLE

June, 1976

PROJECT SPONSORED BY

MONTGOMERY COUNTY INTERMEDIATE UNIT 23
SPECIAL EDUCATION CENTER
1605-B West Main Street
Norristown, PA 19401

EC 090 490

ACKNOWLEDGEMENTS

The Project is indebted to a number of individuals at the state level for their continuing support and advice throughout the period of operation:

John C. Pittenger, Secretary of Education
Dr. Gary Makuch, Director, Bureau of Special and Compensatory Education
Dr. William F. Ohrtman, Chief, Division of Special Education
Ms. Elaine Gilvear, Special Education Advisor for Federal Projects
Mr. Carl Thornton, Assistant Special Education Advisor for Federal Projects
Robert Warkomski, Educable Mentally Retarded
Mrs. Mae Everhart, Administrative Assistant
Russell Demanczyk, Adviser, Gifted and Talented
Robert Piatt, Special Assistant for Intermediate Units
Dr. James Blair, Chief (Acting) of Program Planning and Development
John Resetar, Basic Education Associate

At the local level, appreciation is extended to the following individuals who have gave freely of their time and ideas in helping guide the project to a successful conclusion:

Dr. Dennis U. Harken, Executive Director
Dr. Lester Mann, Director of Special Education and Principal Investigator
Dr. Robert H. Leiss, Assistant Director of Special Education
Mr. T. Peter Boardman, Assistant Director of Special Education
Mr. Jerome T. Potter, Supervisor of Special Education
Mr. William C. Towne, Supervisor of Special Education
Mrs. Sheila M. Buckley, Project Associate
Ms. Marian L. Hikade, Project Associate
Mrs. Sedra Schiffman, Project Associate
Ms. Barbara J. Baird, Teacher/Field Participant
Ms. Marie Diehl, Teacher/Field Participant
Ms. Janet Fogarty, Teacher/Field Participant
Ms. Sharon Lanning, Teacher/Field Participant
Mrs. Joyce M. Kamp, Secretary
Mrs. Joyce H. Cadmus, Secretary
Mrs. Judy R. Rizzo, Secretary

TABLE OF CONTENTS

DEBE - 84D (4/71): Abstract - Narrative 1

Section I: Project Information 3

DEBE-1393 (7/14): Termination Summary Sheets 4

Section II: Program Summary Information 6

1. PROJECT PERSONNEL.................................... 7
2. ORIGINAL PROJECT OBJECTIVES 8
3. PARTICIPANTS/CLIENTELE 9
4. PROCEDURES, SERVICES, AND ACTIVITIES 11
5. EVALUATION PROCEDURES 15
6. FORMAL RESEARCH AND EVALUATION FINDINGS 17
7. PROJECT OUTCOMES 19
8. IMPLICATIONS OF PROJECT RESULTS 20
9. FACTORS RELEVANT TO SUCCESS 22
10. FACTORS RELEVANT TO SHORTCOMINGS 24
11. CONCRETE PROJECT OUTPUTS.................................... 26
12. DISSEMINATION ACTIVITIES 29
13. CONTINUATION OF PROJECT ACTIVITIES AFTER CESSATION OF FEDERAL FUNDS 31
14. EFFORTS BY OTHER AGENCIES TO ADOPT OR ADAPT PROJECT ACTIVITIES..... 32

APPENDICES

A.1 Final Version of Data Recording Sheets.................................... 34

A Third-Party Voluntarily Arranged Evaluation Report.................... 38

B Computer Data.................................... 47

C Participant Rating of Project In-Service Activities.................... 62

D Referenced Library Cards.................................... 65

E Sample Pages From Training Skills Program.................................... 82

F Sample Material From Academics Program.................................... 93

G Part 1: Information Retrieval Sheets 114

G Part 2: Prevocational Curriculum and Testing Procedures............116

TABLE OF CONTENTS 2

H Brochures and Letters to Intermediate Unit........................ 127

I Locations of TMR Children Throughout the Commonwealth of Pennsylvania.. 131

J The Follow-Up Project to the Present One: "A Model for TMR Employment... 140

K Description of New Federal Project: "Outreach In-Service Training Program"............................ 144

Commonwealth of Pennsylvania - Department of Education

1

Local educational Agency Montgomery County Intermediate Unit No. 23
Address: 6198 Butler Pike, Blue Bell, PA 19422
Project Director: Dr. Robert M. Burger

State Project Number F1 72021H-46

DEBE - 840 (4/71)

ABSTRACT – NARRATIVE REPORT OF PROJECT FUNDED UNDER TITLE III ESEA

Title of Project:

CURRICULAR REORGANIZATION OF TRAINABLE MENTALLY RETARDED CLASSES

Funding:

Type	Period of Funding		Amount of New Grant	F.Y. Source	Total Approved Budget Amount by Funding Period
	From	To			
	6/15/72	6/14/73	$50,000	1972	
	6/15/73	6/14/74	$50,000	1973	
	6/15/74	6/14/75	$57,000.	1974	
TOTAL					

Proposed Termination Date 6/14/74

Projected Funding Level for total project period $157,000.00

TARGET POPULATION: The project involved 40 trainable mentally retarded (TMR) children -- 21 were residents of a private residential center (13 girls and 8 boys; 6 Negro and 15 Caucasian) and 19 attended two public schools in Montgomery County (8 girls and 11 boys; 5 Negro and 14 Caucasian). The children in the private center ranged from 6 to 15 years of age and were distributed among three classes (the lowest functioning classes in the facility). One public school class had 10 children with ages ranging from 5 to 11 (5 of these children had been in the project program since September, 1972). The socioeconomic background of these TMR children was primarily middle-class. The other 9 public school children in the second class ranged in age from 7 to 12. These children were also from largely middle-class backgrounds and lived in a residential area with some light industry. Five teachers and six aides were involved in the project in total.

MAJOR OBJECTIVES: The major objectives of this project were (2) to develop formal curricula for TMR students in self-help skills, basic language and number skills, and prevocational skills; (b) to establish a comprehensive center of instructional materials and of reference materials for training and assessment procedures for TMR children; (c) to establish a criterion-reference measurement system to allow continuing, comprehensive assessment of student progress in the areas specified above; (d) to establish a means to redirect or transfer students who find difficulty in the formal curricula, by using remedial or intensive training programs based on center materials previously described; (e) to reorganize TMR classes in Montgomery County according to the aforementioned training and criterion-referenced measurement systems; (f) to prepare teachers to use the instructional program and supporting resource holdings.

ACTIVITIES: Project activities involved completion of the self-help curriculum and objective formats in academic areas. An ongoing catalogued resource center was established to include books, articles, references, audiovisual aids, and an annotated reference list of books. The objectives for teaching academic skills to TMR children have been identified and formats for the skills have been devised, although completion was not possible under this project. A movie film was made to illustrate the different tests and teaching methods involved in the dressing-skills and self-care areas. An Advisory Committee consisting of two parents of TMR children, a school district administrator, a Montgomery County school psychologist, a teacher of TMR children, and the project staff was formed. Based on these discussions, in-service activities were formulated and conducted for teachers, aides, administrators, parents, and program supervisors.

Project Title: CURRICULAR REORGANIZATION OF T.M.R. CLASSES

State Project Number F1 72021H-46

EVALUATION DESIGN: Quantitative data was collected in terms of pre-and posttest assessments. Supporting biographic-demographic information was also available. Following collection of final posttest data in late Spring, 1975, results of the project were analyzed, both in terms of longitudinal, individual differences, and treatment and control group comparisons.

FINDINGS TO DATE: During fall, 1974, students in all participating classes were evaluated in the area of dressing skills. In spring, 1975, these students were re-evaluated and resulting data was used both as an index of student progress and in the evlauation of the curriculum prior to dissemination. Detailed results are available in the termination report. Informal feedback from teachers and parents was quite favorable. Apparently the form of the curriculum is complete enough to be of considerable value to teachers, while allowing them the flexibility to adapt it to their specific situations. Parent response occasionally indicated that skills demonstrated in the classroom have not always carried over into the home. Though it was beyond the objectives of the present project, this finding was interpreted as evidence of the need for further involvement of parents and/or child care workers in the instruction of self-help skills.

DISSEMINATION PLAN: Dissemination activities have consisted largely of in-service presentations to parents of TMR children (Lower Merion School District); parents and administrators (Upper Dublin School District); teachers and administrators (Philadelphia School District); supervisors, psychologists and teachers (I.U. No. 2 and NRRC/P staff); vocational program administrators (Montgomery County); all teachers and aides (Ken-Crest Center); all teachers and aides (Intermediate Unit No. 23). In addition dissemination has taken place at the following annual meetings of professional organizations in the areas of special education: annual meetings of AAMD (Atlanta, May, 1973; Toronto, June, 1974; Portland, Oregon, April, 1975); the Region IX Chapter of AAMD, in November, 1974; Invitational Conference on Mental Retardation in Kansas City, Missouri, in November, 1974; Members of the local Chapter of CEC, in March, 1975; to the Montgomery County School Board of Directors' Convention, in April, 1974. and annual meeting of CEC; New York, April, 1974.

The Dressing, Self-Care, and Grooming Skills were printed and dissemination on a statewise basis. A brochure describing the Dressing, Self-Care, and Grooming Skills publication was printed and disseminated to interested educators throughout the State.

Date completed or revised: 9/18/75

Completed by: Robert M. Burger, Ph. D.

Ext 219

Phone: 215-539-8550

SECTION I

PROJECT INFORMATION

COMMONWEALTH OF PENNSYLVANIA • DEPARTMENT OF EDUCATION

TERMINATION REPORT - ESEA TITLE III

PEBE-1393 (7/74)

INSTRUCTIONS: DUE DATE: 90 days after last grant period date. Complete and return report to ESEA Title III, Bureau of Planning and E uation, Department of Education, Room 501, Education Building, Box 911, Harrisburg, Pennsylvania 17126.

SECTION I - PROJECT INFORMATION

NAME OF LOCAL EDUCATIONAL AGENCY
Montgomery County Intermediate Unit #23

ADDRESS	ZIP CODE
Colony Office Building, 6198 Butler Pike, Blue Bell, PA	19422

PROJECT TITLE	PROJECT TYPE
Curricular Reorganization of T.M.R. Classes	☐ REGULAR ☒ SPECIAL ED ☐ GUIDANCE

PROJECT NUMBER	NAME OF IU IN WHICH LEA IS LOCATED	NUMBER (IU)
72021H-46	Montgomery County Intermediate Unit	23

CONGRESSIONAL DISTRICTS IN SERVICE AREA OF PROJECT
District #13

BRIEFLY SUMMARIZE THE PURPOSE OF THE PROJECT (BRIEF ABSTRACT)

The major pruposes of this project were to develop a dual, compatible system of cruuiculum and criterion-referenced measurement for TMR students in the areas of self-help skills, basic language and number skills, and prevocational skills. Curriculum and measurement materials were field tested and disseminated throughout the Commonwealth. Also, a center for instruction materials and relevant literature was established.

NAME OF PROJECT DIRECTOR (MOST RECENT)
Dr. Robert M. Burger

ADDRESS	ZIP CODE
Special Education Center, 1605-B West Main Street, Norristown, PA	19401

NAME OF PERSON AUTHORIZED TO RECEIVE GRANT	POSITION OR TITLE	AREA CODE AND PHONE NUMBER
Dr. Dennis Harken	Executive Director	215-643-7600

ADDRESS	ZIP CODE
Colony Office Building, 6198 Butler Pike, Blue Bell, PA	19422

SIGNATURE OF PERSON AUTHORIZED TO RECEIVE GRANT	DATE SUBMITTED
Dr. Dennis Harken, Executive Director	

INDICATE DEGREE TO WHICH TITLE III PROJECT ACTIVITIES HAVE CONTINUED AFTER PHASE-OUT OF FEDERAL SUPPORT.

☐ ACTIVITIES NOT CONTINUED

☐ ACTIVITIES CONTINUED AT LESS THAN ORIGINAL PROJECT LEVEL

☐ ACTIVITIES CONTINUED AT SAME LEVEL AS ORIGINAL PROJECT

☒ ACTIVITIES CONTINUED AT GREATER OR EXPANDED LEVEL ABOVE ORIGINAL PROJECT LEVEL

, PROJECT HAD PROJECT DIRECTOR(S) IN ADDITION TO THAT NAMED ABOVE, LIST BY NAME AND INDICATE DATES DURING WHICH EACH POSITION.

Dr. Lester Mann, 6/15/72 - 6/14/73

IS THE MOST RECENT PROJECT DIRECTOR NAME NAMED ABOVE PRESENTLY A MEMBER OF LEA'S STAFF? ☒ YES ☐ NO	IF NOT, INDICATE HIS MOST RECENT KNOWN ADDRESS N/A

INDICATE LOCATION OF PROJECT'S FISCAL AND PROGRAM RECORDS.

Microfilm/Microfiche Records System
Special Education Center
1605 B. West Main Street
Norristown, PA 19401

and

Federal Projects Accounting Office
Main Administration Building
6198 Butler Pike
Blue Bell, PA 19422

LIST ALL GRANT AWARD LETTERS, INCLUDING AMENDMENTS TO AWARDS (INCREASES OR DECREASES INDICATED BY AN *.)

DATE(S) OF AWARD	AMOUNT	PROJECT BUDGET PERIOD		AMOUNT UNCLAIMED C RETURNED
		FROM	TO	
5/22/72	$50,000.00	6/15/72	6/14/73	$ 700.97
3/ 9/73	50,000.00	6/15/73	6/14/74	$ 776.32
6/ 5/74	57,000.00	6/15/74	6/14/75	$ 275.22
				$
				$

SECTION II - PROGRAM SUMMARY INFORMATION

(Summarize on separate sheets of paper in narrative form for entire life of project using following suggested outline)

1. List and describe the personnel positions of the project indicating the following: positions which were in effect throughout project's life, those whic met special needs during only a portion of the project, part-time vs. full-time positions, use of consultants, para-professional and clerical staff.

2. State the purpose of your project in terms of its original objectives. If any deviations from the project's original objectives occurred, state the new objectives and explain why the changes were necessary.

3. Describe the participants/clientele of the project. What was the target group of the project's activities? How were the participants selected? Was th project for a single district? several districts? within a county? regional? Statewide consortium? Give approximate numbers of participants. Was th an identifiable indirect clientele? If in-service of teachers or other staff was a component, describe selection process for participants and whether in-service was done primarily in summer or during school year. Note also degree of non-public school involvement.

4. Specify the procedures utilized to attain the project's present objectives. (Include types or services and activities.)

5. Describe all evaluation procedures used during the life of the project. Similarly, describe any subsequent evaluation activities. (Do not include on- evaluation.)

6. Describe any "hard data" that has resulted from evaluation activities of the project (i.e., research findings).

7. Specify the project's outcomes or results in order of importance.

8. Discuss the implications of the project's results as they relate to your LEA; to education in general.

9. List the most prominent factors pertinent to the project's successes in order of importance. Explain.

10. List the most prominent factors pertinent to the project's shortcomings in order of importance. Explain.

11. List the "concrete" outputs of the project, i.e., did the project produce curriculum guides, a manual for implementing new teaching strategies, resourc collections, evaluation instruments, or any other tangible products capable of being shared with other interested persons. As part of your response, in clude your annotated bibliographies of instructional and curriculum materials and audiovisual programs.

12. Discuss dissemination activities; disregard activities of a strictly public relations nature aimed at the general public; relate only those activities whi were intended to promote diffusion of the project's methods or design to other districts or which resulted in other educators seeking information on how to implement your project in their district.

13. Discuss continuation of project activities after withdrawal of Federal support. Include description of strategies used by project personnel to assure continuation.

14. Describe efforts by other districts or Intermediate Units to adopt or adapt in whole or part activities developed by this project.

SECTION II

PROGRAM SUMMARY INFORMATION

1. PROJECT PERSONNEL

Project Directors:	Dr. Lester Mann, unpaid director, 6/15/72 - 6/14/73 Responsibilities: general administration of project and program development.
	Dr. Robert M. Burger, 6/15/73 - 6/14/75 Responsibilities: direction of personnel, fiscal management, project administration, curriculum development, and tests and measurement design.
Associate Director:	Dr. Robert M. Burger, 6/15/72 - 6/14/73. Responsibilities: fiscal management and curriculum development.
Itinerant Research Teachers:	Mrs. Sheila M. Buckley, 9/1/72 - 6/14/75. Responsibilities: curriculum development, audiovisual materials, teacher in-service, and technical editing.
	Ms. Marion L. Hikade, 9/1/72 - 8/73. Responsibilities: curriculum development, resource acquisition, and teacher in-service.
Secretarial-Bookkeeping:	Joyce M. Kamp, 6/15/72 - 8/10/74. Responsibilities: resource record keeping, cataloging, purchasing, bookkeeping, correspondence, and general administrative responsibilities.
	Joyce H. Cadmus, 8/10/74 - 6/14/75. Responsibilities: resource record keeping, cataloging, purchasing, bookkeeping, correspondence, and general administrative responsibilities.
Contracted Services:	Barbara Baird, June - August 1974. Responsibilities: academic curriculum development.

2. ORIGINAL PROJECT OBJECTIVES

Based on literature search and needs assessment of educators involved with the instruction of TMR students, the following objectives were established for project 7202-1H during the spring of 1972.

A. The establishment of a comprehensive holding of printed, audio-visual, and other materials used in training and assessment procedures for the trainable retarded at the elementary school level. These are to be cataloged and made available to all eligible schools and training institutions in Pennsylvania.

B. Establish formal curricula in the areas of self-help, basic reading, number work, and provocational training according to a systematized sequential system providing identifiable and measurable behavioral and instructional objectives.

C. Establish a criterion-referenced measurement system that will permit the continuing and comprehensive assessment of pupil progress in the areas specified above in Objective B.

D. Establish means by which students who encounter difficulty in proceeding along the curricular lines established in Objective B, may be recycled in training or transferred into specific remedial or intensive training programs from which they may later return to the formal curriculum track.

E. Restructure trainable classes within Montgomery County, Pennsylvania, according to the instructional objective training and criterion-referenced-measurement systems discussed above. Eventually, it is anticipated that all trainable classes within the county shall adapt the new procedures. Other training institutions within the state shall be invited to utilize the procedures if the project's evaluation and research efforts indicate that they are successful.

Since continuous feedback is a design characteristic of criterion-referenced measurement, results of evaluation efforts were to be available to educators on an ongoing basis. Formal evaluation was to be based on comparison of the participating experimental classes as opposed to several not participating in the project.

3. PARTICIPANTS/CLIENTELE

Teachers and Aides: A sample of five teachers and six aides was selected for in-depth participation during the developmental phases of the project. Three of the classes were located in a private institutional setting, while the other two were operated by public auspices: a demonstration class located in a large urban shopping complex and a classroom located in a suburban public elementary school. Teacher(s) working in each of these locations worked with project staff in critiquing drafts of skill areas and in field-testing final drafts. Actual classes selected represented a broad spectrum of characteristics of students including such factors as intelligence, socioeconomic level, residence, age, sex, and contributing handicapping conditions.

Prior to working with participating teachers and aides, inservice programs were given at each facility where class was housed. Following this inservice teachers met for individual instructions with project staff to begin development of curriculum and achievement of other project goals. After the resource holdings were compiled, teachers were invited to make use of them on a lending basis for the duration of the project. In this way, teachers could examine material and determine its use in their classroom before requesting purchase of the material. Also, educators with questions concerning the education of trainable students could request information under a variety of descriptors to access the literature and reference material accumulated by project staff as primary resources. Through these efforts, many teachers were familiar with project activities when final in-service offerings began during the summer of 1975. The nature of these in-service programs will be discussed under Item 12 of Section II.

The project was also oriented to meeting the curriculum needs of educational personnel throughout the Commonwealth who had responsibilities for the programming and/or instruction of trainable mentally retarded students. This was to be achieved through eventual dissemination of curriculum materials developed on the project to key personnel located in every Intermediate across the state.

__Students__: Specifically, the project involves 40 trainable mentally retarded children -- 21 are residents of Ken-Crest Institution (13 girls and 8 boys; 6 Negro and 15 Caucasian) and 19 attend 2 public schools in Montgomery County (8 girls and 11 boys; 5 Negro and 14 Caucasian). The Ken-Crest children range from 6 to 15 years of age and are distributed among 3 classes (the lowest functioning classes in the Institution). Wynnewood Road School in Ardmore has 10 children with ages ranging from 5 to 11 (5 of these children have been in the project program since September 1972). The socioeconomic background of the trainable mentally retarded children is primarily middle class. The last nine children attend Plymouth Meeting Mall Demonstration class and range in age from 7 to 12. These children are also from largely middle class backgrounds and live in a residential area with some light industry.

4. PROCEDURES, SERVICES, AND ACTIVITIES

With the onset of the Right to Education Act, it was realized that at increasing rates TMR children were entering the Pennsylvania public school systems and that the teachers had few, if any, curricula to follow in training and teaching these children. A Title III project, "Curricular Reorganization of TMR Classes," was therefore proposed and funded to meet this need. The objectives of the project ranged from developing instructional materials for the educator in the classroom to setting up a materials center concerned specifically with the trainable mentally retarded.

To meet project objectives, the following have been accomplished:

A. Formal curricula of techniques and monitoring methods have been established which consist of screening tests, inventories of prerequisite skills, pretests, instructional objectives, posttests, and retention tests. These curricula cover the areas of dressing skills, self-care and grooming. They have been tested in two public school classrooms and in three institutional classrooms for between eight and eighteen months. Physiotherapists and teachers of the physically handicapped at the Child Development Center (a private school for early education) and at the Montgomery County School for the Physically Handicapped were consulted, and they have assisted in the revision and development of all areas of self-help. Apart from the instructional techniques and monitoring methods, two kinds of recording sheets which allow for continuous assessment of student progress have been developed. Along with the latter information, biographic and demographic information was collected to assist in validation analysis. To elaborate further on the monitoring methods, the project defines terms as follows:

Screening Test: A one-question test to determine if the child can do the whole task. For example: "Put on your socks." If he succeeds, he proceeds to the next screening test. If he fails to complete the task successfully, he is identified as being in need of assistance on that task, and he moves on to the inventory of prerequisite skills.

Prerequisite Skills Inventory: A list of prerequisite skills which the child must have mastered to enter the program. Specific skills are matched with specific activities. Task analysis of self-care skills (e.g., dressing) requires certain behavioral, motoric skills to complete the whole task. To benefit from testing and instruction, we feel the child should have certain attending bahaviors as well as a specified minimum of motoric competence.

Pretest: A test to determine which steps of the whole task the child cannot complete. It is a breakdown of the screening test into specific sequential steps known as "items".

Specific Objective: One of the sequential items for instructing a child who fails that item on the pre-or posttest. It is intended to guide the instructor in working with the child. The specific objective is broken down into sequential steps which illustrate the behavior required for completion of the whole task. These are used as criteria for success within the program. If the child fails to complete the whole task on the screening test, he is recycled through this step-by-step training sequence until each step is mastered.

Posttest: A one-question mastery test to determine if the child has integrated instructional steps sufficiently to accomplish the original task. The posttest differs from the screening test in that it is post-instructional, and therefore no cues or prompting are given. However, the teacher records completion of each item as the child progresses. Should the child be unsuccessful , he is recycled through the instructional phase as necessary for completion of the task.

Retention Test: A one-question test to monitor the child's retention of instruction as evidenced by successful completion of a posttest, the child is given a single request: "Put on your sock." If the child cannot complete the task, we say he has not retained the instruction and should be recycled through instructional and task integration phases.

B. An on-going cataloged resource center has been established, including books, articles, references, audio-visual aides, and an annotated reference list of books, articles, teaching techniques, and problems relevant to TMR children. This center was housed in the Montgomery County Special Education Center and in the near future will be housed in one of the statewide information centers that has Montgomery County Intermediate Unit as the local education agency, to allow for maximum utilization.

C. The objectives for teaching academic skills to TMR children have been identified. Formats for these have been devised. To this end, the Regional Resource Center in King of Prussia, Pa., has been extensively used; teachers, administrators and school psychologists have been consulted; and materials and ideas have been gathered from teachers and classroom observation.

D. A movie film has been made, illustrating the different tests and teaching methods involved in the dressing skills and self-care areas.

E. An Advisory Committee consisting of two parents of TMR children, a school district administrator, a Montgomery County school psychologist, a TMR teacher, and the project staff, was formed to discuss and advise on the problems and solutions of the TMR population encountered by members of the committee. Apart from formally meeting with this Committee, project staff met informally and quite frequently with various members of this Committee.

During the last year of funding, the project had a three-fold function of curriculum writing, program implementation, and dissemination during the fiscal year 1974-1975. During the period July through August, 1974, an experienced teacher of trainable mentally retarded children joined the project staff in writing specific curriculum sequences for academic objectives. General instructional formats for these objectives had been developed during the past year. This phase of curriculum writing was completed by early fall, 1974. At that time, the second function began.

Teachers, aides, administrators and parents associated with participating classes received in-service presentations concerning project goals and resources. Pretest data concerning project-related variables (self-help, academic, biographic-demographic, etc.) was gathered and instruction using the grant program began. Revision and development was based on teacher input and continued throughout the school year. Concurrent with these implementation activities, staff extended the curriculum into the area of prevocational skills, thereby completing the final writing phase of the program. Examples of this material were introduced to the classroom teachers periodically throughout the year.

The final function of the project during its third year of operation was to disseminate the instructional program on a statewide basis. This goal was accomplished in the following manner: critical review by educators experienced in working with TMR populations; final editing; publication of material; dissemination of material to Intermediate Units, selected districts, and other state and federal agencies; and subsequent in-service by project staff on use of the program.

Apart from the three major functions of the third year, the final grant activity involved gathering and analyzing quantitative posttest data to be used in evaluation of the project. Evaluation results are included in this report.

5. EVALUATION PROCEDURES

One of the primary objectives of Curricular Reorganization of Trainable Mentally Retarded Classes was to develop, field-test, and disseminate a criterion-referenced system of monitoring the growth of TMR students longitudinally. An initial recording sheet, developed in the beginning of the first year to accompany the curriculum "Training for Independence", was compatible with Digitek mass data processing systems and offered specific data concerning the learning of self-care skills. The original form was redesigned during the middle of the first year by participating teachers and project staff when it was found to be too detailed to allow an uninterrupted session of instruction. Using the revised form, data has been kept on all students who have gone through the program during the developmental phases. The results of this form of evaluation will be discussed in Item 6. Using this form, students in all participating classes were evaluated in the area of dressing skills in the fall of 1974. Students were again evaluated in the spring of 1975. This data formed the basis for final revision of the curriculum prior to publication and dissemination during the late spring of 1975. (See Appendix A.1 for final data forms).

Informal feedback from teachers and parents has been quite favorable. Apparently the form of the curriculum is complete enough to be of considerable value to teachers, while allowing them the flexibility to adapt it to their specific situations. Parent response has occasionally indicated that skills demonstrated in the classroom have not always carried over into the home. Though it is beyond the objectives of the present project, this finding has been interpreted as evidence of the need for further involvement of parents and/or child care workers in the instruction of self-help skills.

Formative evaluation has also been provided by the Bureau of Special and Compensatory Education through coordinators Russell Demanczyk and Robert Warkomski. In addition to these state officials, Dr. Norris Haring, Professor, University of Washington, Ms. Patricia Bourexis, University of Virginia, and Dr. Edward Sontag, Bureau of Education for the Handicapped (Department of Health, Education, and Welfare, Washington, D.C.) have reviewed and critiqued project activities at the request of LEA and project staff. In all cases they felt that the material contained in "Training for Independence" was appropriate to the needs of trainable students, was in an extremely usable format, and should be disseminated on a national basis, if possible.

The final form of evaluation data was collected at the request of the project director and represented an outside evlauation by a well-qualified professional in order to determine the value of program accomplishments midway through the total (3 year) funding period. A copy of this report may be found in Appendix A.

6. FORMAL RESEARCH AND EVALUATION FINDINGS

The hard data referred to in Item 5 above is taken over the three project years from recording sheets kept on students diagnosed as trainable mentally retarded and assigned to classes selected for participation in the project. The subjects are homogeneous in terms of socioeconomic background, race, religion, age, and level of functioning as determined by psychological and classroom records. Mobility of students into and out of classrooms over the three-year period of the project made it impossible to collect longitudinal data on a satisfactory number of subjects. Therefore, it was determined that final analysis would be concerned with individual item data in terms of its relationship to seven biographic and demographic variables. Students' progress in each of the 64 dressing skill areas appropriate to his or her sex was analyzed with a single-factor, analysis-of-variance technique.

In order to determine whether receiving instruction based on the curriculum "Training for Independence" resulted in the ability to perform to criterion on a specific skill, and whether the frequency of this competency was beyond that expected had the student not received instruction (i.e., maturation effects or informal instructions) and using the aforementioned single-factor design, dependent data on the following factors were analyzed: chronological age, mental age, intelligence quotient, total years in program, residence, sex, and absence from school. A copy of the results obtained on one of the 64 skill areas is provided as a sample of these analysis in Appendix B. The program provided descriptive statistics, correlation coefficients, and analysis-of-variance summary tables for each of the seven factors mentioned. The other analyses cannot be presented in detail due to the sheer bulk of the computer printout; however, the trends that did emerge are described below.

Other analyses comparing success of the program collapsed across skill areas were designed and run. Although they are of experimental interest, the limited frequency in many cells of the analysis make it impossible to generalize results. Under auspices of outgrowth projects, additional data is being collected in sufficient numbers that greater confidence can be placed in analysis. Among the results obtained by these analyses are the indications that undressing is a much easier task than is dressing and warrants instruction at an earlier developmental level. It is also indicated that fastening skills are by far the most difficult and should be taught only after the student has demonstrated a good deal of competence in prerequisite fine-motor inventory skills. Further, it is likely that TMR students do not forget everything they are taught, but tend to remember that which they use and tend to forget that which they do not use. This is not different from tendencies long established in research involving normal populations but is in conflict with baseless allusions to the fact that TMR students have no capacity for skill retention. It may be that TMR students demonstrate retention curves which decline more rapidly than those of a normal population; however, this must be established by research beyond the scope of that presented in this report. Finally, it was indicated that use of the program resulted in greater dressing skill competency among the subjects "than did any other technique." As indicated above, project staff was too small to serve a sufficient number of classrooms to allow data being drawn on a sample large enough to warrant generalization of the finding.

An additional form of evaluation has been conducted by project staff in cooperation with the director of the Outreach Training Project. (Item 12 and 13 explain how the Outreach Project related to the present project). In those Intermediate Units (LEA's) receiving in-depth in-service presentations, formal evaluation procedures were implemented following a research design stated in the proposal of that project. All sessions of in-service are rated by participants along a number of variables. Rating begins with a gross indication of in-service value and proceeds to very specific comments concerning various facets of the session. A summary of ratings for each LEA served within the Commonwealth of Pennsylvania is also provided in Appendix C. This data will indicate the frequency and percentage of those participants rating presentations as to their value collapsed across the number of sessions provided. It can be seen from this data that the in-service activities of this project have been well received and appear to be meeting the needs of educators working with trainable mentally retarded students.

7. PROJECT OUTCOMES

The items proceed from greatest importance to lesser importance.

A. All skills within the areas of dressing, self-care, and grooming have been reviewed, collected and catalogued. The holdings, together with equipment provided by other cooperating federal projects, are housed at the Montgomery County, I.U. Special Education Center and are available to teachers involved in the development of project curriculum.

B. An extensive literature search has been completed in the area of prevocational and vocational skills. A method of task analysis has been identified for this area of instruction. Using materials presently in the possession of Project staff, in-service of educational personnel throughout the State will allow them to develop prevocational and vocational training tailored to local situations.

C. Pre-academic and academic skills have been written and are presently being field-tested by participating teachers in Montgomery County.

D. Entering behaviors, pre-and post-instruction and retention level inventories have been developed for all areas of dressing, self-care, grooming, pre-academic and academic skills. Simplified recording devices for all assessment and instruction accompany all above areas.

E. In-service activities have been expanded to include participating teachers and aides, administrators and parents, vocational program administrators (County-wide) and non-participating teachers (both public and institutional settings). A presentation has also been made to the local Chapter of CEC.

F. Extensive holdings of resources and materials have been reviewed, collected and catalogued. The holdings, together with equipment provided by other cooperating federal projects, are housed at the Montgomery County, I.U. Special Education Center and are available to teachers involved in the development of project curriculum.

G. Relevant materials concerning training and evlauation of trainable retarded children have been compiled. A partial list of resources is stated below.

- National Association for Retarded Children
- American Association for Health, Physical Education and Recreation
- United States Food and Drug Administration
- Michigan Department of Education, Special Education Division
- United Cerebral Palsy Foundation
- Instructional Materials Center Network for Handicapped Children and Youth
- Educational Resources Information Center on Exceptional Children
- Pennsylvania Resource and Information Center for Special Education (P. R. I. S. E.)
- Research and Information Services for Education (R. I. S. E.)
- The National Easter Seal Society for Crippled Children and Adults
- University of Illinois
- Southern Illinois University
- Michigan State University
- South East Regional Board, Atlanta, Ga.
- Elwyn Institute, Media Pa.
- Inservice meetings sponsored by Montgomery County, Intermediate Unit focused on TMR.
- Visitations to a variety of school special education rooms

at the trainable level and yet represented an extremely heterogeneous population in terms of skill and ability factors. In response to recent legislation, the project has attempted to meet and exceed educational requirements as outlined in the Commonwealth Plan for Education and Training (COMPET) documents. Within Montgomery County a coordinated program evolved which allowed districts to provide appropriate instruction corresponding to meaningful placement of TMR children. The role of the project was to produce a total instructional program which provided the teachers with assessment, instruction, and resources needed for mastery of skills ranging from basic activities of daily living to complex prevocational tasks.

Although the program was written with the trainable mentally retarded child in mind, it was designed for use in the following educational situations to be found within the Commonwealth of Pennsylvania: with any child who is having difficulty mastering such skills; with the educable or severely retarded child; with the emotionally disturbed and learning disabled child; or with the patient in a rehabilitation hospital. The people who would use this curriculum include teachers and parents of handicapped people, physiotherapists, departments of special education in universities and colleges, state departments of special education, and child-care workers in mental institutions and half-way houses.

9. FACTORS RELEVANT TO SUCCESS

The most unbiased manner in which to identify the factors leading to successful attainment of project objectives would be to reflect those enumerated in formal and informal procedures. The following was taken from Part V of the ESEA Title III On-Site Evaluation Team Summary and represents the evaluation team's view of project strengths two months prior to the end of funding: "We see the following strengths: (1) the materials developed so far, based on research and the literature, and developed in response to specific needs, are magnificent with high potential for utilization, (2) the record keeping and evaluation forms are excellent and mesh beautifully with the materials developed, (3) the data accumulated is quite good and very useful for planning, (4) the dissemination as done and as planned is very good, the booklets and the films are excellent." (From 1974-1975 on-site visit). Based on the above summary, the project director would emphasize the following three points:

1. No project which has the responsibility of providing a useful curriculum within a fixed amount of time can accomplish their task without a thorough review of the literature. Such review takes time, is frustrating, and does not result in an immediate product which can be disseminated to educators. However, once the search is complete, rapid progress can be made in the actual development of the curriculum and fewer errors are made in the process. The most important result is that teachers and, eventually, the students, receive far better tools on which to base instruction and eventual competencies. In conducting the literature search, the staff enjoyed the excellent cooperation of the Regional Resources Center of Eastern Pennsylvania (RRC) and Research and Information Services for Education (RISE), both of which are located in King of Prussia, PA. Once completed, a further benefit of such a literature search is the identified basis for a useful and accessible resource holding for those involved with a specific area of exceptionality.
2. Despite the education and experience of a project staff, products which

are written for teachers should be reviewed and in part developed by those individuals. The benefits of such a process include addressing of their needs, establishment of content and user validity, and a sense of active participation which invariably improves the eventual acceptance of the curriculum upon its dissemination. As pointed out in other sections of this report, the project worked closely with a number of teachers who dealt with students under a variety of circumstances. Contact was maintained on a weekly basis and a great deal of credit for formats, recording devices, and strategies goes to these individuals.

3. If the relationship referred to in No. 2 can be developed with teachers, evaluation of any product is expedited. As with a literature search, a great deal more can be accomplished if the researcher or curriculum writer knows within a short amount of time that one strategy or format does not benefit the child and should be redone. Research evidence gathered during the life of this project supports the position that there is no substitute for the good judgement of an individual in determining the basic elements of a good curriculum. However, once these decisions are made we should not be so arrogant as to feel they do not need the fine shaping that can result from data collection and analysis. The form of data collection used in the project resulted from the ability of TMR students to demonstrate competence in specific skill areas contained in three broad areas of instruction. A sample of the wealth of information gathered in this manner may be reviewed in Item No. 6 of Section II, (see Appendix B).

10. FACTORS RELEVANT TO SHORTCOMINGS

As with question No. 9, the fairest approach to identifying weaknesses within the project would be to examine comments by trained evaluators who are not as involved in the daily activity as were the director and his staff. The following is taken from Part V of the 1975 ESEA Title III On-Site Evaluation Team Summary:

"The built-in weakness in any TMR project that parental cooperation is very difficult to secure; the staff here, because of its small size, did less in this area than is desirable (see our recommendation in this area)." (From 1974-1975 report).

Following the initial evaluation of the project(1973), certain weaknesses were identified and were stated in the following manner:

1. Less emphasis should be placed on the development of instructional materials via the TMR materials center.
2. Establish an advisory committee to help guide decision making on program direction.
3. Expand the dissemination of this program beyond the agencies described in this program.
4. Expand in-service training program to include more TMR teachers.

Each of these points was dealt with during the life of the project and were not apparent weaknesses by June of 1975.

The project director has the following recommendations for other projects which may become involved in similar endeavor. The skills which we hoped to develop in TMR students were those which normally would be carried out in the home or residence of the child. The fact that the children we assessed during the beginning of the project did not demonstrate competencies in these areas reflected the difficulty parents and child care workers have in being able to determine when such a skill should be taught, how it should be taught, and how to alleviate the frustration which comes with slow progress in these areas. Also, the project must be aware of the problems faced by those responsible for the children, and must find a way for them to assume a positive function in training these students. The final point is perhaps the most critical. No matter how good a resource might be, it definitely will not be of benefit if potential users are not aware of its existence, and yet it is not enough simply to notify educators of the development and availability of a much-needed product. Teachers will use what they are familiar with and have confidence in. We believe there is no substitute for personal contact during the dissemination process and as much as possible during the instructional phase of in-service. The energy and time put into on-site in-service have accomplished the ultimate goal of the project, which was to have evidence of use of the curriculum in classrooms throughout the Commonwealth of Pennsylvania.

11. CONCRETE PROJECT OUTPUTS

During the first year of the project work was begun on a criterion referenced based program to develop competencies in activities of daily living skills. By the end of the first year of operation a literature search had been completed representing review of over 800 articles and other resources available to the staff. Information judged to be of a representative nature or of definite importance was photocopied and placed in a cataloged library for future reference by staff and participating teachers. This international search also allowed the identification of material and curriculum oriented to instruction of the TMR child and commercially available through clearing houses, publishers, government, or the originating agency. All of this material has been collected and placed in the reference library. Each document or device in the library has been recorded on a reference card, a sample of which is enclosed in Appendix D of this Section.

Based on the information gathered during the literature search, project staff began the development of curriculum formats which would provide educators dealing with TMR students with a self-contained body of information. In writing the curriculum it is believed that educators were seldom given the necessary objectives to reach competencies in a skill without having to consult other sources of information. By leveling objectives according to specificity, we felt that it would not be necessary for any participating teachers to go beyond the specific objective level of single action commands.

The curriculum is based around a series of tests which pinpoint what the student can and cannot master. The first test (the screening test) is a one-item test to discover if the student can do the gross activity (e.g. Can he put on a sock?). If the student succeeds, he is given a screening test in another area. If he fails, he is given a test to discover if he has the necessary prerequisite skills for that task (e.g. Can he grasp in a pincer grasp?). If he lacks these requirements, he is not yet ready to enter the curriculum and must be trained. To this end, the teacher is given a list of materials and manipulative devices to help her instruct, but no detailed instruction is given in these areas. When the student is ready to be taught a specific skill, he is given a pretest. This is a multi-item inventory to find out which of the small steps of the gross activity the student needs to be taught (e.g. He may not be able to put his toes into the toe of the sock, but he may be able to pull the sock up past his ankle; the teacher knows she must teach him only the step he cannot master). She then consults the instructional area (the specific objectives) where she is given detailed, one-action instructions in teaching the necessary step (e.g. "Grasp the cuff of the sock with the left hand, thumb to the inside"). These steps are taught and practiced many times until the teacher feels that the student is able to perform successfully on his own. Then the student is given a posttest to find out if he can combine the small steps and so do the gross activity unaided. Unless he needs further instruction or practice, he is given a screening test in another area. At a later date, however, he is given a retention test to find out if he can still perform the gross activity successfully. Appendix E consists of sample pages from the Dressing Skills program.

Based on experience gained in the writing of the Dressing Skills and Grooming Programs, development of an Academic Skill Curriculum was undertaken. Once again, literature was surveyed through existing agencies, as well as by project staff. It was realized from the onset that Academics should also incorporate principles of criterion referenced measurement which had been shown to result in successful instruction of trainable mentally retarded students. Further, it was determined that a consistent format should be created in order to shorten preparation time by teachers. The actual content of each Academic area was developed in much the same way as the Dressing Skills program in that possible strategies were developed by project staff and field tested in actual classrooms. The resultant curriculum attempts to fill a void in the literature by providing educators with material relevant to the instruction of low level skills critical to the independence and fututr progress of students in Academic areas. The specific material of each skill is determined by its unique characteristics and vary according to the most successful procedure available. A sample of a prepublication draft of the Academics can be found in Appendix F of Section 2. The final area of curriculum development involved skills necessary to achieve independence around the home or residence of the student.

This pre-vocational curriculum and reference system is a dual faceted endeavor which has been designed both as a research and teaching tool. The literature in the area of pre-vocational programming for the mentally retarded has been exhaustively reviewed and abstracted. A computer based retrieval system has been developed to allow potential users the opportunity to locate a complete annotated (full abstract) bibliography in any specific area of pre-vocational programming for the mentally retarded. Project personnel feel that this system will have a wide scope of usage with any professional (teacher, administrator, student, etc.) who is working in a pre-vocational setting with mentally retarded individuals.

The pre-vocational curriculum has its theoretical roots grounded firmly in this literature review. The curriculum is organized as a synthesis of skills that are integral in both home and industry. The major portions of the curriculum include: a task analyzed sequence of method verbs broken down into eight areas (essential, storing, bedmaking, maintainence, cleaning, washing and ironing, sewing and cooking); and the referrents of these analyses in industrial jobs. Specific jobs can thus be identified in a community and specific task training can be accomplished in the classroom.

Samples of information retrieval sheets and pre-vocational curriculum and test procedures are included in Appendix G of this section.

12. DISSEMINATION ACTIVITIES

As the project curriculum was developed, in-service relating to the use of the curriculum was given to professionals and paraprofessionals at the facilities of participating teachers. These opportunities were used to acquaint other educators with an instructional program which they might eventually be using. At the beginning of the second year of the project, fiscal year 1973-1974 , more emphasis was placed on dissemination of project material. Project staff were requested to provide in-service to various public educational organizations within the Commonwealth of Pennsylvania. This year was used to develop in-service material and modes of presentations which resulted in the greatest understanding and use of the curriculum "Training for Independence".

During the third year of operation, fiscal year 1974-1975, project staff were primarily involved at the prepublication stage with editing and development of the curriculum and in researching responses to questions which had been raised by educators receiving in-service. It became apparent at this time that the staff was meeting a need for information dissemination to educators within the Commonwealth. During June, of 1975, the completed curriculum recording sheets, and letters of introduction were disseminated to Directors of Special Education in each Intermediate Unit within the state. It was the intention of project staff that the four-volume set entitled, "Training for Independence", would be used by teachers of the trainable mentally retarded beginning in the fall of the 1975-1976 school year. The remaining printed copies of the curriculum were sent to educators throughout the Commonwealth who had responded to an initial brochure announcing the availability of the curriculum. A copy of this brochure and letters to Intermediate Unit personnel are enclosed in Appendix H. A detailed list of organizations receiving in-service during the life of the project is as follows:

A. Parents of TMR children - Lower Merion School District

B. Parents and administrators - Upper Dublin School District

C. Teachers and Administrators - Philadelphia School District

D. Supervisors, psychologists and teachers - I.U. #2 and NRRC/P staff

E. Vocational Program Administrators - Montgomery County

F. All teachers and aides - Ken-Crest Institution

G. Instructional staff of Pennsylvania Intermediate Units 8, 10, 11, 12, 17, 26

H. All teachers and aides at I.U. #23

Papers presented at Professional Conventions:

A. Annual Meeting of AAMD, Atlanta in May, 1973

B. Annual Meeting of CEC, New York in April, 1974

C. Annual Meeting of AAMD, Toronto in June, 1974

D. Annual Meeting of AAMD, Portland, Oregon in April, 1975

E. The Region IX Chapter of AAMD, in November, 1974

F. Invitational Conference on Mental Retardation in Kansas City, Missouri in November, 1974

G. Members of the local Chapter of CEC in March, 1975

H. To the Montgomery County School Board of Directors' Convention in April, 1974

Responses by educators who have received the in-service indicated that the applicability of the curriculum extends beyond that of the original target population.

Appendix I provides a summary of trainable mentally retarded children in public school classes across the Commonwealth of Pennsylvania, as well as those in sheltered workshops. These children were the intended target group for eventual receipt of services, assuming educators to whom materials had been disseminated would adapt the techniques.

13. CONTINUATION OF PROJECT ACTIVITIES AFTER CESSATION OF FEDERAL FUNDS

Prior to the end of fiscal year 1973-1974, the project staff became concerned with the dearth of programing which should lead a TMR student to vocational preparedness. This concern was born out of the literature search conducted in preparation for the final year of the project. It had also become quite evident that educators involved with TMR students had not been able to obtain in-service presentations which related directly to their needs and those of their students. In order to deal with these problems, a second project was written. With the support of the Bureau of Special and Compensatory Education the new project began operation in September, 1974. A summary of project goals under this new grant are given in Appendix J. All of that material relates to the project, " A Model for TMR Employment."

At the end of 1974-1975 fiscal year it had become evident that an in-service need existed above and beyond that offered by the project, " A Model for TMR Employment". A third project was therefore funded which was supported by both state and local educational agency monies. It represented an opportunity to offer in-depth in-service to educators working with TMR students on a broad range of topics identified by participants, administrators, and project staff. This project has worked in cooperation with the staff of " A Model for T.M.R. Employment" and continued the efforts and strategies originally developed by staff of "Curricular Reorganization of Trainable Mentally Retarded Classes". Appendix K contains an excerpt from the PRISE Reporter (No. 7, September, 1975), which offers a summary of the Outreach In-service Training Program.

14. EFFORTS BY OTHER AGENCIES TO ADOPT OR ADAPT PROJECT ACTIVITIES

When Intermediate Units across the Commonwealth received the curriculum "Training for Independence," numerous requests were received by project staff to provide in-service during the 1975-1976 school year. The intent of these in-service sessions was primarily to facilitate the use of the project curriculum in classes throughout Pennsylvania. Many Intermediate Units chose to delay distribution of the curriculum to the teachers until in-service could be offered. This decision was made on the basis that teachers might disregard the four-volume set since they had had no training in its use. Using the resources of the extension project, " A Model for T.M.R. Employment," referred to in Item 13 above, it has been possible to provide in-service to the educational personnel of over two-thirds of the Intermediate Units in the state. In each of these participating Intermediate Units, the curriculum developed by the project is being used by professional staff, teachers, and aides of the trainable mentally retarded, and, in several cases, by educators involved with other areas of exceptionality. Personnel within these I.U.s are also benefiting from infromation and expertise gained by the project staff through the content of in-service presentation and variety of supporting materials available to them. Eventually, all I.U.s within the state will receive preliminary in-service, which includes preparation of teachers for using "Training for Independence." Should continued funding permit, every I.U. within the Commonwealth will receive in-depth in-service of the kind described for the Outreach Project. Materials identified for the original project, " Curricular Reorganization of Trainable Mentally Retarded Classes," will form the foundation for these courses. It is very probable that the computerized literature search developed jointly under "Curricular Reorganization of Trainable Mentally Retarded Classes," and "A Model for T.M.R. Employment" will be implemented through an agency such as NLRC/P (National Learning Resource Center of Pennsylvania), RISE (Research and Information Services for Education), or RRC Regional Resources Center of Eastern Pennsylvania for Special Education), of King of Prussia, Pennsylvania. These organizations are geared for statewide dissemination of resources and provide suitable outlets for this information.

APPENDIX A.1

FINAL VERSION OF DATA RECORDING SHEETS

Recording Sheet: Grooming and Self-Care Skills

E

Student:
Instructor:
School/Institution/Hospital:
Date Started:

Tasks (by skill area)	Screening (dates) Can	Cannot	Pretest	Instruction	Posttest	Retention (dates) Can	Cannot	Informed Parents/Child-Care Workers (dates)	Can do at home Yes	No
65 Adjust water temp.			1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7					
66 Use washcloth			1 2 3	1 2 3	1 2 3					
67 Dry body			1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8					
68 Wash hands and arms			1 2 3 4	1 2 3 4	1 2 3 4					
69 Wash face and neck			1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6					
70 Wash ears			1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8					
71 Wash torso			1 2 3 4 5	1 2 3 4 5	1 2 3 4 5					
72 Wash legs and feet			1 2 3 4 5	1 2 3 4 5	1 2 3 4 5					
73 Tub-bathe			1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9					
74 Shower			1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9					
75 Shampoo			1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10					
76 Blow nose			1 2 3 4	1 2 3 4	1 2 3 4					
77 Brush hair			1 2 3 4	1 2 3 4	1 2 3 4					
78 Apply deodorant			1 2 3 4	1 2 3 4	1 2 3 4					
79 Shave			1 2 3 4 5 6 7 8 9 10 11	1 2 3 4 5 6 7 8 9 10 11	1 2 3 4 5 6 7 8 9 10 11					
80 Cut fingernails			1 2 3 4	1 2 3 4	1 2 3 4					
81 Cut toenails			1 2	1 2	1 2					
82 Brush teeth			1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9					
83 Clean dentures			1 2 3 4 5	1 2 3 4 5	1 2 3 4 5					
84 Toilet train			1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7					
85 Sanitary napkin on			1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8					
86 Sanitary napkin off			1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7					
87 Apply eyeshadow			1 2 3	1 2 3	1 2 3					
88 Apply mascara			1 2 3	1 2 3	1 2 3					
89 Apply lipstick			1 2 3 4	1 2 3 4	1 2 3 4					
90 Apply cheekblush			1 2 3	1 2 3	1 2 3					
91 Apply cologne			1 2 3 4 5	1 2 3 4 5	1 2 3 4 5					
92 Remove makeup			1 2 3	1 2 3	1 2 3					
93 Use napkin			1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8					
94 Eat finger foods			1 2 3 4 5	1 2 3 4 5	1 2 3 4 5					
95 Drink from cup			1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7					
96 Use spoon			1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6					
97 Use fork			1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6					
98 Use knife and fork			1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8					

Copyright reserved 1975. Montgomery County Intermediate Unit, Blue Bell, Pennsylvania.
See statement in Self-care Curriculum.

Recording Sheet: Dressing Skills

Student

Instructor:

School/Institution/Hospital:

Date Started:

Tasks (in alphabetical order)	Screening (dates) Can	Cannot	Pretest	Instruction	Posttest	Retention (dates) Can	Cannot	Informed Parents/Child-Care Workers (dates)	Can do at home Yes	No
23 Belt on			1 2 3 4	1 2 3 4	1 2 3 4					
24 Belt off			1 2 3 4	1 2 3 4	1 2 3 4					
25 Bow-tie on			1 2 3 4	1 2 3 4	1 2 3 4					
26 Bow-tie off			1 2	1 2	1 2					
01 Bra on			1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6					
02 Bra off			1 2 3 4	1 2 3 4	1 2 3 4					
51 Buckle			1 2 3 4	1 2 3 4	1 2 3 4					
52 Unbuckle			1 2 3 4	1 2 3 4	1 2 3 4					
53 Button			1 2 3 4	1 2 3 4	1 2 3 4					
54 Unbutton			1 2 3 4 5	1 2 3 4 5	1 2 3 4 5					
27 Clip-on tie on			1 2 3	1 2 3	1 2 3					
28 Clip-on tie off			1 2	1 2	1 2					
39 Coat/jacket on			1 2 3 4	1 2 3 4	1 2 3 4					
40 Coat/jacket off			1 2 3 4	1 2 3 4	1 2 3 4					
29 Dress on			1 2 3 4 5	1 2 3 4 5	1 2 3 4 5					
30 Dress off			1 2 3 4	1 2 3 4	1 2 3 4					
03 Full slip on			1 2 3 4	1 2 3 4	1 2 3 4					
04 Full slip off			1 2 3 4 5	1 2 3 4 5	1 2 3 4 5					
05 Garter belt on			1 2 3	1 2 3	1 2 3					
06 Garter belt off			1 2	1 2	1 2					
07 Girdle on			1 2 3 4	1 2 3 4	1 2 3 4					
08 Girdle off			1 2 3 4	1 2 3 4	1 2 3 4					
41 Glove on			1 2 3	1 2 3	1 2 3					
42 Glove off			1 2 3	1 2 3	1 2 3					
09 Half slip on			1 2 3 4	1 2 3 4	1 2 3 4					
10 Half slip off			1 2 3	1 2 3	1 2 3					
43 Hat/cap on			1 2	1 2	1 2					
44 Hat/cap off			1 2	1 2	1 2					
45 Headscarf on			1 2	1 2	1 2					
46 Headscarf off			1 2	1 2	1 2					
55 Hook			1 2 3	1 2 3	1 2 3					
56 Unhook			1 2 3	1 2 3	1 2 3					
57 Lace			1 2 3 4	1 2 3 4	1 2 3 4					
58 Unlace			1 2	1 2	1 2					
47 Mitten on			1 2 3	1 2 3	1 2 3					
48 Mitten off			1 2 3	1 2 3	1 2 3					
49 Muffler/scarf on			1 2 3	1 2 3	1 2 3					
50 Muffler/scarf off			1 2	1 2	1 2					
21 Pantyhose on			1 2 3 4 5	1 2 3 4 5	1 2 3 4 5					
22 Pantyhose off			1 2 3	1 2 3	1 2 3					
11 Pullover shirt on			1 2 3	1 2 3	1 2 3					
12 Pullover shirt off			1 2 3	1 2 3	1 2 3					
31 Shirt/blouse on			1 2 3 4	1 2 3 4	1 2 3 4					
32 Shirt/blouse off			1 2 3 4	1 2 3 4	1 2 3 4					
15 Shoe/boot on			1 2 3 4 5	1 2 3 4 5	1 2 3 4 5					
16 Shoe/boot off			1 2	1 2	1 2					
33 Shorts on			1 2 3 4	1 2 3 4	1 2 3 4					
34 Shorts off			1 2 3 4 5	1 2 3 4 5	1 2 3 4 5					
35 Shirt on			1 2 3 4	1 2 3 4	1 2 3 4					
36 Shirt off			1 2 3 4	1 2 3 4	1 2 3 4					
59 Snap			1 2 3	1 2 3	1 2 3					
60 Unsnap			1 2 3	1 2 3	1 2 3					
17 Sock on			1 2 3	1 2 3	1 2 3					
18 Sock off			1 2	1 2	1 2					
19 Stocking on			1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6					
20 Stocking off			1 2 3 4	1 2 3 4	1 2 3 4					
37 Trousers/pants on			1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6					
38 Trousers/pants off			1 2 3 4 5	1 2 3 4 5	1 2 3 4 5					
61 Tie			1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7					
62 Untie			1 2	1 2	1 2					
13 Underpants on			1 2 3	1 2 3	1 2 3					
14 Underpants off			1 2 3 4	1 2 3 4	1 2 3 4					
63 Zip			1 2 3 4	1 2 3 4	1 2 3 4					
64 Unzip			1 2 3	1 2 3	1 2 3					

Copyright reserved 1975. Montgomery County Intermediate Unit, Blue Bell, Pennsylvania

See statement in Dressing Skills Curriculum

Recording Sheet: Toilet Training

Student's name:
Teacher's name:
School/institution/hospital:
Date training started:
Complete as appropriate. The first line is done for you.

Key: A=alone WH=with help

DATE	TIME	BOWEL MOVEMENT	URINATION	NOTHING	INDICATED NEED TO GO	WENT WILLINGLY	TOOK PANTS DOWN	SAT ON TOILET	CLEANED SELF	FLUSHED TOILET	PULLED PANTS UP	WASHED HANDS
12/2	9:15	✓			✓		WH	WH	WH	A	WH	WH

Copyright reserved 1975. Montgomery County Intermediate Unit, Blue Bell, Pennsylvania.
See statement in Self-care Curriculum.

APPENDIX A

THIRD-PARTY, VOLUNTARILY ARRANGED EVALUATION REPORT

EVALUATION OF THE PROJECT
"CURRICULAR REORGANIATION OF TMR CLASSES"

From: Barton B. Proger, Ed. D., Coordinator of Evaluation Services,
Montgomery County Intermediate Unit No. 23, 1605 B West Main St.,
Norristown, Pennsylvania 19401

To: Robert M. Burger, Associate Project Director

Date: April, 1974

Introduction

In the early part of 1974, Mr. Burger asked the present evaluator to conduct an evaluation of the second year of his Title III project. Realizing that the official state on-site evaluation team would be examining the project in late April or early May, Mr. Burger desired to have a voluntarily arranged on-site evaluation to augment the state efforts. Mr. Burger wished to obtain as much feedback as possible on ways to improve his project operations. Thus, the present evaluator was called upon to perform such services.

There are a number of constraints upon this evaluation of which the reader should be aware. Perhaps most important is the fact that the evaluator is affiliated with the sponsoring Local Education Agency (i.e., Montgomery County Intermediate Unit). Further, Mr. Burger is a personal acquaintance of the evaluator, and the two have worked closely on previous projects. However, in spite of these obvious restrictions to the ultimate degree of objectivity that might be achieved in such an evaluation, the evaluator feels he examined the Title III project in a quite objective fashion. Objectivity was possible for a number of reasons. First, during the past two years or so, the evaluator has had little time to be in close contact with the project in general and Mr. Burger and his staff in particular. Thus, the evaluator had no preconceived notions of what should or should not be appropriate functioning in a project of this type. Second, the evaluator is accustomed to performing internal evaluations of projects affiliated with the employing LEA. Because of the size of the routinely funded LEA operations plus other affiliated federal projects (about 400 employees), the Intermediate

Unit created the evaluator's position to carry out precisely this type of internal evaluation activity that is the subject of the present report. Further, the evaluator has been involved in several federal project and private school on-site evaluations so that the present activity was not at all strange to him.

A final restriction on the present project evaluation of which the reader should be aware is the lack of familiarity of the evaluator with the trainable mentally retarded populations. The evaluator identifies more readily with learning disabled children and, to a somewhat lesser extent, educable mentally retarded children. The evaluator's main contact with trainable retarded children has been through editing numerous manuscripts submitted for publication to the Journal of Special Education (the evaluator is an editor on that journal, as well as writing test reviews for it). Thus, the evaluator's knowledge of trainable populations is mainly on the theoretical side. On the other hand, however, the present evaluator feels he can identify quite closely with the task analysis philosophy of curriculum building and the system of behavioral objectives and criterion referenced measurement that is being embodied in the curricular efforts.(These are areas with which the evaluator has had intimate daily contact in the past.)

A final note on the manner in which the present evaluator has conducted this project evaluation also clarifies the restrictions of this process. The evaluator sees the project as being primarily a research and development, with the main emphasis on development of curricular materials. Thus, the evaluator has focused upon examining the nature of the materials that have been produced to date and that are scheduled for the future. The evaluator has deliberately sought to provide a formative type of evaluative feedback that will hopefully prove useful to the project staff in modifying their efforts. Thus, it has been quite easy for the evaluator to remain objective with regard to materials and by default any contamination that would exist if the evaluator were examining teaching ability or administrative ability of people he personally knows, is avoided.

In summary, the evaluator feels the evaluative results presented herein are objective and honest reactions to what he has seen with regard to project efforts.

Procedure

The details of the project evaluation were planned and implemented in late March, 1974. There were two main phases to obtaining evaluative feedback on project efforts. First, the evaluator made on-site visits to teachers who were cooperating in a field test of the curricular materials. Second, the evaluator personally examined in detail the materials and reacted with his own suggestions for improvement.

Planning for the two-phase evaluation process was accomplished by informal talks with the project staff. The evaluator was also told how the project functioned during this second year of operation, as well as during its first year. Thus, before the evaluator entered into either phase of the project evaluation, he was familiar with the general details of project operation.

The first phase--the on-site visits--was completed during the mornings of Thursday, March 28th, and Friday, March 29th, 1974. The Associate Project Director was present at the on-site locations but did not sit in on the one-to-one evaluation discussions between the evaluator and the teachers. All teachers knew beforehand of the purpose of the visit and were prepared to allow 20 to 30 minutes for private discussion. Three teachers and one aide who were cooperatively trying out project materials participated in these private on-site discussions. The evaluator felt that the teachers and the aide were at ease and frank during the private interviews. However, the evaluator had time to see actual classroom activities in only two classes.

The second phase of this evaluation--the examination of materials produced by the project--was carried out independently of the teacher interviews. The evaluator was given free access to all materials, regardless of what stage of development they were in.

Results

Phase One: Teacher Interviews: Apparently, there were six cooperating teachers from Montgomery County who agreed to try out the materials for this project in actual TMR classroom situations. Three of the teachers appear to have made much use of the project materials on a fairly regular basis; two teachers made fairly much use of the materials but not to the degree that the first three did; one teacher was only minimally involved. This section of the report on "Phase One" results represents an anonymous compilation of the most substantive reflections on the part of the three teachers who were interviewed. These anonymous teacher comments are summarized under several headings: (a) initial presentations of ideas to the teachers, (b) communication of project personnel with cooperating teachers during the school year, (c) packaging of project materials, (d) organization of subject content within the materials, (e) use of student record forms, (f) new contributions to be made in way of materials, and (g) general teacher appraisal of project materials. In the following paragraphs, these topics are considered in turn.

The initial presentation to the cooperating teachers of materials and working arrangements (depending upon the specific teacher) was carried out as early as Spring of the 1972-1973 academic year but at least by Fall of the 1973-1974 academic year. The teachers felt that the details of future working arrangements were not quite clear to them. For example, one misconception was that the project staff would be akin to itinerant resource teachers who would actually spend a great deal of time in working directly with the children; this, of course, was not the case in that the project staff was intended to be involved primarily in product development. However, until this matter was clarified a fair amount of time and much confusion resulted. Some thought should be given to avoiding this problem for the coming academic year.

The teachers appeared to be content with the ongoing contact with project staff during the 1973-1974 academic year and the initial confusion was eliminated. One or more project staff visited each teacher once every one or two weeks, and sometimes even more frequently. The major purpose of these visits (as viewed by the evaluator) was for formative evaluation of the project materials. That is, the project staff was continuously looking for constructive criticism with which to modify the materials before any defects were unwittingly perpetuated in new areas of materials. The teachers seemed appreciative that many of their suggestions were taken seriously and later embodied in new and/or old materials. The project staff also attempted to impart new or different ways of carrying out or supplementing various classroom tasks associated with the project content areas. A number of these ideas were often found by the extensive reading and formal literature searching that the project staff carried out.

Several suggestions were made concerning the packaging of the materials. A loose-leaf notebook format should be considered because of its ease of use without bulk of the spiral-bound volumes. Also, a loose-leaf format would allow more than one teacher to use a single volume of materials in that only those pages of direct use to the teacher during a given day would be removed from the binder. Another suggestion was to have more durable paper (perhaps heavier stock or even vinyl-coated stock), but cost factors might be prohibitive.

Organization of materials yielded some concensus among the three teachers interviewed. One of the strongest feelings was that the tasks should be grouped together the way the teacher would normally proceed. That is, putting on and taking off a given article of clothing should be side by side and not separated by other tasks. The teachers also wanted to see reduction of a lot of the wasted space that appeared on a large number of pages within each volume. Prerequisite skills appeared repetitious and probably could be presented at only one point in a book. Finally, the teachers felt the lack of page numbers was a hindrance in locating certain concepts.

Student recording forms are a topic with mixed feelings. Two of the three teachers interviewed felt the forms were of definite aid to them in helping keep track of a child's problems and in scheduling future instruction. One interesting use of the forms was also to communicate quickly to a new volunteer aide who might be strange to the class just where a child stands. The third teacher interviewed used the form in a somewhat informal way and did not rely on it to any great extent; the evaluator got the impression that the remaining two teachers out of the five who were most actively involved in materials field testing, also were somewhat loose in their use of the forms. Clearly, paper work is always a concern to a teacher who is pressed by many different responsibilities. It does not, however, seem to be a major problem here. In fact, perhaps an expanded "pep-talk" explanation would be useful in creating greater usage in other teachers.

The teachers who were interviewed felt the materials could be expanded to include several other areas. New self-help skills that were suggested included toilet training, brushing teeth, menstruation problems, washing and eating. Pre-academic readiness skills could also be considered, such as attention span, color discrimination and size discrimination. A third area would be pre-vocational skills such as simple assembly tasks and homemaking skills.

Finally, it is of interest to consider the general appraisal of the system by the three teachers who were interviewed. When asked whether or not the teachers felt they would have been at a total loss without the project materials, they of course answered negatively. The teachers said they would have been involved in teaching self-help skills but their instructional efforts would have been far less organized. The teachers did feel the system had definite value, and the evaluator gathers that this value lies mainly in the fact that the materials comprise an instructional management and decision-making system for these curricular areas. The teachers felt that without the system they would have proceeded in a somewhat haphazard manner, perhaps failing to task-analyze a child's strengths and weaknesses adequately and even perhaps omitting crucial skills altogether. One teacher did express some skepticism on whether the system could be extended to certain other curricular areas of interest to TMR teachers (e.g., reducing bizarre behavior and higher academic areas). However, on the whole, the teachers appeared to be very favorable to the system of criterion-referenced measurement embodied in the project materials.

Phase Two: Evaluator's Appraisal of Project Materials and Functions: There appear to be several major areas of functioning that the project attempted this year: (a) editing and revision of self-help booklets produced during first year, (b) construction of booklets for new self-help skills, (c) field-testing last year's self-help skills, (d) in-service training,dissemination and consultation on these CRM ideas for TMR children, (e) creation of an information bank of materials and reprints on TMR training, (f) planning and initial construction of CRM materials for the TMR in basic academic skills (g) production of slide and film sequences on use of TMR project materials.

The above activities represent an impressive array of functions. It must be remembered that the main emphasis of the project appears to be planning and production of new CRM materials for TMR children. Thus, (a), (b), (c), and (f) would logically be expected to demand the majority of project time, and from what the evaluator can see, this is the case. Thus, it is pleasantly surprising to see the project able to delve into the other activities listed above. The reviewer was particularly impressed with functions (c) and (f). In (c), formative evaluation seems to play a real role in molding the materials by actively involving the teachers in making changes. Teachers are visited usually once every two weeks to get their comments and suggestions. Activity (f) is impressive because of the large amount of groundwork that is laid before any materials are put into even rough form. Not only are extensive literature reviews conducted, but also the teachers are consulted. (It is particularly noteworthy that one of the experienced TMR teachers who has been using the materials will work on this production area during this summer.) Nonetheless, the evaluator does have a number of suggestions for improvement of project activities; the bulk of these concern the format of the materials themselves. It should be noted by the reader that these suggestions were reached more or less independently of the teacher comments covered in the results of Phase One.

In terms of reorganizing the materials, the evaluator agrees with some of the teachers' comments in that the sheer bulk of the materials might be reduced. The screening test, posttest, and retention test are all roughly similar and only one sheet would be necessary. It would seem that the "Inventory" of the skill under question could be run together with all the "Specific Objective" sheets without causing a great deal of confusion. This would result in a fair amount of saved space, regardless of whether a loose-leaf binder or a spiral-binding approach were selected.

It almost seems as though the Prerequisite Skills are somewhat less important or at times nonessential aspects of a child's instruction once he has gotten started in these materials. There is a large amount of repetition across these Prerequisite Skills. The evaluator wonders whether these items might be considered as a once-and-done "readiness" booklet to be gone through before any self-help skills are ever attempted. It would appear to be very monotonous to the child to have to go through many of the same Prerequisite Skills again and again in testing. This, too, would reduce the bulk of the current materials.

The evaluator feels a manual of some type is necessary. This booklet would describe the advantages and usage of the system, as well as explaining the CRM and diagnostic prescriptive movement. The manual probably should be a small, separate booklet. Backup instructional materials might be put into this manual.

Finally, the flow chart that is at the front of each booklet appears to need some minor adjustments. As the project staff already did in Step 1, the columns labeled "If the child fails" and "If the child passes" should be left blank for Steps 4 and 6. Further, as noted above, the evaluator feels Steps 3 and 4 should be removed from the regular cycle of skills instruction and put into a pre-skills readiness booklet.

A final suggestion for future program evaluation of this project is to consider arranging during the fall of the new operating year a third party on-site evaluation team. In fact, two types of teams might both be considered. First, a team might be brought in for two days and consist of two acknowledged experts (probably university-related people) in TMR research and practice. Second, another team of strictly applied practitioners of TMR techniques might be composed of Pennsylvania Intermediate Unit people unfamiliar to project staff. One or both of these evaluations might be conducted in any given project year.

Conclusions

Apart from the evaluator's somewhat "tainted" objectivity, he feels he can truly say that the present year's activities are being carried out in a professional, meaningful, and productive manner. Good planning and highly competent implementation are quite apparent. Knowing the current emphasis upon, and value of, CRM systems in all areas of education, the evaluator firmly believes this project should be continued and indeed even extended into new areas of TMR curriculum production.

APPENDIX B

COMPUTER DATA

```
                              S T A T I S T I C A L   A N A L Y S I S   S Y S T E M

               N          SUM              MEAN           MIN VALUE       MAX VALUE      CORRECTED SS     STANDARD DEV
CA            10    1018.00000000    101.80000000     60.00000000    179.00000000   11231.60000000     35.32641442
MA             6     236.00000000     39.33333333     29.00000000     49.00000000     277.33333333      7.44759469
IQ             9     394.00000000     43.77777778     29.00000000     55.00000000     593.55555556      8.61351971
TTL_YPS       10      26.00000000      2.60000000      1.00000000      6.00000000      28.40000000      1.77639935
RESID         12      16.00000000      1.33333333      1.00000000      2.00000000       2.66666667      0.49236596
SEX           12      19.00000000      1.58333333      1.00000000      2.00000000       2.91666667      0.51492865
ABSEN         10      19.00000000      1.90000000      1.00000000      5.00000000      12.90000000      1.19721900
S19           12      28.00000000      2.33333333      1.00000000      3.00000000      10.66666667      0.98473193
```

```
                                   S T A T I S T I C A L   A N A L Y S I S   S Y S T E M

                     CORRELATION COEFFICIENTS  /  PROB > |R| UNDER HO: RHO=0  /  NUMBER OF OBSERVATIONS

                        CA          MA          IQ     TTL_YRS       RESID         SEX       ABSEN         S19

 CA               1.000000    0.434705   -0.590991    0.221679    0.264072    0.590805   -0.284257   -0.264072
                    0.0000      0.6088      0.0918      0.5435      0.5339      0.0700      0.5695      0.5339
                        10           6           9          10          10          10          10          10

 MA               0.434705    1.000000    0.096483    0.765936    0.000000    0.343203    0.242681    0.000000
                    0.6088      0.0000      0.8488      0.0755      1.0000      0.5089      0.6444      1.0000
                         6           6           6           6           6           6           6           6

 IQ              -0.590991    0.096483    1.000000   -0.149759   -0.033861   -0.608816    0.011849    0.033861
                    0.0918      0.8488      0.0000      0.7007      0.9286      0.0799      0.9745      0.9286
                         9           6           9           9           9           9           9           9

 TTL_YRS          0.221679    0.765936   -0.149759    1.000000   -0.474713    0.237356    0.135837    0.474713
                    0.5435      0.0755      0.7007      0.0000      0.1635      0.5144      0.7082      0.1635
                        10           6           9          10          10          10          10          10

 RESID            0.264072    0.000000   -0.033861   -0.474713    1.000000    0.239046   -0.396203   -1.000000
                    0.5339      1.0000      0.9286      0.1635      0.0000      0.5403      0.2564      0.0000
                        10           6           9          10          12          12          10          12

 SEX              0.590805    0.343203   -0.608816    0.237356    0.239046    1.000000    0.440225   -0.239046
                    0.0700      0.5089      0.0799      0.5144      0.5403      0.0000      0.2013      0.5403
                        10           6           9          10          12          12          10          12

 ABSEN           -0.284257    0.242681    0.011849    0.135837   -0.396203    0.440225    1.000000    0.396203
                    0.5695      0.6444      0.9745      0.7082      0.2564      0.2013      0.0000      0.2564
                        10           6           9          10          10          10          10          10

 S19             -0.264072    0.000000    0.033861    0.474713   -1.000000   -0.239046    0.396203    1.000000
                    0.5339      1.0000      0.9286      0.1635      0.0000      0.5403      0.2564      0.0000
                        10           6           9          10          12          12          10          12
```

```
S T A T I S T I C A L   A N A L Y S I S   S Y S T E M                                    13:46 MONDAY, APRIL 14, 1975

                    PROC ANOVA;CLASSES S19;MEANS S19;MODEL DEMOG
                                                          =S19;TEST S19 BY RESIDUAL;
```

```
                         S T A T I S T I C A L   A N A L Y S I S   S Y S T E M

          DATA SET SK19

          CLASSES      VALUES

          S19          1 3
```

```
                          S T A T I S T I C A L   A N A L Y S I S   S Y S T E M

                                               MEANS

     S19               CA           MA           IQ      TTL_YRS        RESID          SEX        ABSEN

       1        119.500000           -    43.0000000   1.00000000   2.00000000   1.75000000   1.00000000
                         2           -             1            2            4            4            2
       3         97.375000   39.3333333   43.8750000   3.00000000   1.00000000   1.50000000   2.12500000
                         8            6            8            8            8            8            8
    ---------------------------------------------------------------------------------------------------

    OVERALL MEANS   101.800000   39.3333333   43.7777778   2.60000000   1.33333333   1.58333333   1.90000000
                            10            6            9           10           12           12           10
                         S T A T I S T I C A L   A N A L Y S I S   S Y S T E M

              ANALYSIS OF VARIANCE FOR VARIABLE CA          MEAN     101.800000   C.V.     35.5002658

              SOURCE                                     DF  SUM OF SQUARES   MEAN SQUARE

              S19                                         1        783.2250     783.22500
              RESIDUAL                                    8      10448.3750    1306.04688
              CORRECTED TOTAL                             9      11231.6000    1247.95556


       TESTS    SOURCE                                   DF  SUM OF SQUARES   MEAN SQUARE          F VALUE       PROB > F
       NUMERATOR:   S19                                   1        783.2250     783.22500          0.59969         0.5339
       DENOMINATOR: RESIDUAL                              8      10448.3750    1306.04688
```

```
                              S T A T I S T I C A L   A N A L Y S I S   S Y S T E M

          ANALYSIS OF VARIANCE FOR VARIABLE MA          MEAN      39.3333333    C.V.      18.9345628 %

          SOURCE                                  DF  SUM OF SQUARES   MEAN SQUARE

          S19                                      0        0.000000     0.0000000
          RESIDUAL                                 5      277.333333    55.4666667
          CORRECTED TOTAL                          5      277.333333    55.4666667


  TESTS   SOURCE                                  DF  SUM OF SQUARES   MEAN SQUARE          F VALUE       PROB > F
  NUMERATOR:   S19                                 0        0.000000     0.0000000          0.00000         1.0000
  DENOMINATOR: RESIDUAL                            5      277.333333    55.4666667
```

```
                         S T A T I S T I C A L   A N A L Y S I S   S Y S T E M

          ANALYSIS OF VARIANCE FOR VARIABLE IQ          MEAN     43.7777778   C.V.     21.0222376 %
          SOURCE                                 DF  SUM OF SQUARES   MEAN SQUARE
          S19                                     1        0.680556     0.6805555
          RESIDUAL                                7      592.875000    84.6964286
          CORRECTED TOTAL                         8      593.555556    74.1944444

  TESTS   SOURCE                                 DF  SUM OF SQUARES   MEAN SQUARE          F VALUE        PROB > F
  NUMERATOR:   S19                                1        0.680556     0.6805556          0.00804          0.9286
  DENOMINATOR: RESIDUAL                           7      592.875000    84.6964286
```

```
                         S T A T I S T I C A L   A N A L Y S I S   S Y S T E M

            ANALYSIS OF VARIANCE FOR VARIABLE TTL_YRS      MEAN     2.60000000   C.V.     63.7812460 %
            SOURCE                                   DF  SUM OF SQUARES  MEAN SQUARE
            S19                                       1       6.4000000   6.40000000
            RESIDUAL                                  8      22.0000000   2.75000000
            CORRECTED TOTAL                           9      28.4000000   3.15555556

TESTS       SOURCE                                   DF  SUM OF SQUARES  MEAN SQUARE        F VALUE       PROB > F
NUMERATOR:  S19                                       1       6.4000000   6.40000000        2.32727         0.1635
DENOMINATOR: RESIDUAL                                 8      22.0000000   2.75000000
```

```
                         S T A T I S T I C A L   A N A L Y S I S   S Y S T E M

             ANALYSIS OF VARIANCE FOR VARIABLE RESID          MEAN      1.33333333

             SOURCE                                DF  SUM OF SQUARES   MEAN SQUARE

             S19                                    1      2.66666667    2.66666667

             RESIDUAL                              10      0.00000000    0.00000000

             CORRECTED TOTAL                       11      2.66666667    0.24242424


TESTS        SOURCE                                DF  SUM OF SQUARES   MEAN SQUARE        F VALUE        PROB > F

NUMERATOR:   S19                                    1      2.66666667    2.66666667     9999.99999          0.0001

DENOMINATOR: RESIDUAL                              10      0.00000000    0.00000000
```

```
                         S T A T I S T I C A L   A N A L Y S I S   S Y S T E M

          ANALYSIS OF VARIANCE FOR VARIABLE SEX          MEAN      1.58333333   C.V.      33.1202794 %
          SOURCE                                    DF  SUM OF SQUARES   MEAN SQUARE
          S19                                        1      0.16666667   0.166666667
          RESIDUAL                                  10      2.75000000   0.275000000
          CORRECTED TOTAL                           11      2.91666667   0.265151515

TESTS     SOURCE                                    DF  SUM OF SQUARES   MEAN SQUARE          F VALUE        PROB > F
NUMERATOR:   S19                                     1      0.16666667   0.166666667          0.60606          0.5403
DENOMINATOR: RESIDUAL                               10      2.75000000   0.275000000
```

```
S T A T I S T I C A L   A N A L Y S I S   S Y S T E M

ANALYSIS OF VARIANCE FOR VARIABLE ABSEN          MEAN      1.90000000    C.V.      61.3643350 %

SOURCE                                   DF  SUM OF SQUARES  MEAN SQUARE

S19                                       1       2.0250000   2.02500000
RESIDUAL                                  8      10.8750000   1.35937500
CORRECTED TOTAL                           9      12.9000000   1.43333333


TESTS      SOURCE                        DF  SUM OF SQUARES  MEAN SQUARE        F VALUE       PROB > F
NUMERATOR:  S19                           1       2.0250000   2.02500000        1.48966         0.2554
DENOMINATOR: RESIDUAL                     8      10.8750000   1.35937500
```

```
S T A T I S T I C A L   A N A L Y S I S   S Y S T E M                                   13:46 MONDAY, APRIL 14, 1975

                 DATA SK20;SET MAIN;IF S20=1 OR S20=3;

                     1 OBSERVATIONS IN DATA SET SK20          72  VARIABLES

                                                   PROC CORR;VARIABLES DEMOG
                                                                             S20;
```

BRIEF EXPLANATION

The enclosed material of this Appendix B represents just one of 64 total analyses undertaken on the separate skills areas of the project's curriculum materials. For each of the 64 analyses, there were 23 children who had complete, usable data (there were more children, but many of these had to be deleted, primarily because of missing data). Of the 23 children in each of the 64 analyses, 12 were boys and 11 girls.

Criterion scoring (here represented by the particular skill area selected, namely, S 19) was of pass-fail nature; in particular, 1 represented "fail", 2 represented "pass with instruction," and 3 represented "pass without instruction." For sex, 1 stood for "males" and 2 for "females."

The variable of residence used 1 for "institutional residence" and 2 for "natural home setting." Absenteeism was measured on a rating sclae from 1 to 5 where each digit represented a band-width of absences (1 stood for the band width of least absences).

The particular example enclosed in Appendix B deals with Skill Area "S-19," a code name for "Stocking On." This particular task pertained to only females; thus, the N here is only 12.

APPENDIX C

PARTICIPANT RATINGS OF PROJECT IN-SERVICE ACTIVITIES

I.U. 8 5 sessions 94 evaluations

Topics: Sex Education, Task Analyses, Methods Time Measurement, Handicap Simulation, Training for Independence

Poor	0	0.00%
Fair	4	4.25%
Good	44	46.81%
Excellent	46	48.94%

I.U. 9 4 sessions 47 evaluations

Topics: Training for Independence, Methods Time Measurement, Task Analyses, Handicap Simulation

Poor	0	0.00%
Fair	2	4.25%
Good	23	48.94%
Excellent	22	46.81%

I.U. 10 8 sessions 35 evaluations

Topics: Job Analyses, Methods Time Measurement, Career Education, Rights of the Handicapped, Sex Education, Training for Independence, Pre-Vocational Applications, Use of Industrial Directories

Poor	0	0.00%
Fair	0	0.00%
Good	11	31.43%
Excellent	24	68.57%

I.U. 11 5 sessions 61 evaluations

Topics: Sex Education (2) Handicap Simulation, Task Analyses, Training for Independence

Poor	0	0.00%
Fair	1	1.64%
Good	32	52.46%
Excellent	28	45.90%

I.U. 16 4 sessions 86 evaluations

Topics: Sex Education, Job Analyses, Industrial Directories, Curriculum Adjustment, Training for Independence, Vocational Evaluation

Poor	0	0.00%
Fair	16	18.60%
Good	50	58.14%
Excellent	20	23.46%

I.U. 17 3 sessions 49 evaluations

Topics: Vocational Evaluation, Sex Education, Training for Independence, Handicap Simulation

Poor	0	0.00%
Fair	5	10.20%
Good	35	71.43%
Excellent	9	18.37%

I.U. 19 3 sessions 86 evaluations

Topics: Training for Independence, Handicap Simulation, Vocational Evaluation, Task Analyses

Poor	0	0.00%
Fair	7	8.14%
Good	57	66.28%
Excellent	22	25.58%

TOTAL: 32 sessions 458 evaluations

POOR	0	0.00%
FAIR	35	7.64%
GOOD	252	55.02%
EXCELLENT	171	37.34%

APPENDIX D

REFERENCED LIBRARY CARDS

BRIEF EXPLANATION

These library cards represent a sampling of the locally gathered information resources (books, curriculum guides, government reports, instructional materials, and so on). Such items were obtained during the course of the project in attempts to do an exhaustive search of all materials approrpiate to TMR programing. The resources so accumulated will probably be donated to either the Regional Resources Center of Eastern Pennsylvania (RRC), which is a state/federal-funded IMC for special education materials, or to Research and Information Services for Education (RISE), which is a state/federal-funded information agency.

It should also be noted here that all articles and other informational documents gathered in this process have been analyzed and coded according to many different background parameters. The codes for the various background variables (in effect, codes for indexing) were keypunched onto computer cards to make information retrieval machine-based. (This aspect of the information holdings is not represented in the present document). As of June, 1976, negotiations were carried out under the present project's extension project (" A Model for TMR Employment") to place the machine-oriented information bank into the ERIC Clearinghouse for Career Education, located at the University of Northern Illinois, DeKalb, Illinois. Computer-generated literature searches will be produced on the basis of the background variable codes and submitted to ERIC as new documents to be placed in their system as annotated bibliographics.

Connolly, A.J.
Research in Mathematics Education and the Mentally Retarded.
The Arithmetic Teacher, October 1973

This article reviews research over the past 30 years on the problems of teaching mathematics to mentally retarded pupils. Curricular and instructional practices are discussed, and an instructional model is presented. The author also reviews the research that culminated in the KeyMath (1971) diagnostic Test.

050

Arithmetic and
Number Concepts

Davidson, Patricia S.
Kinds of Manipulative Devices for Elementary Math

050

Copyright 1968

Arithmetic

Corle, Clyde G.
Skill Games for Mathematics
The Instructor Publications, Inc.

053
C545

Copyright 1968

Bahr and Shuey
Trainable Curriculum Guide (Extracts)

050

Arithmetic

Brown, L., Bellamy, T., Gadberry, E. A Procedure for the Development and Measurement of Rudimentary Quantitative Concepts in Low Functioning Trainable Students. Training School Bulletin 68, Nov. 1971.

050

Arithmetic and Number Concepts

Cawley, John F. and Vitello, Stanley J.
Model for Arithmetical Programing for Handicapped Children, Bureau of Education for the Handicapped, US Office of Education., October 1972.

050

A Course of Study for Trainable Mentally Retarded Minors, (A Continuum of Developmental Skills)
Oakland Unified School District, August 2, 1967

050

Number Concepts

A Curriculum Guide for Teachers of Mentally Retarded Children. Volume 2 - Preprimary; Primary. Austin Independent School District, Texas, 1964.

050

Number Concepts

Armstrong, J.R., Schmidt, H. Simple Materials for Teaching Early Number Concepts to Trainable-Level Mentally Retarded Pupils. Arithmetic Teacher, Feb., 1972

Brown, Lou
Using Behavior Modification Principles to Teach Sight Vocabulary, 1970.

100

Reading

Borreca, Frank and Burger, Robert
A Functional Core Vocabulary for Slow Learners

100

Copyright 1950

Reading

Blanton, William and Farr, Roger
Reading Tests for the Secondary Grader:
A Review and Evaluation International Reading Association

103

Brown, L. and York B.
Teaching Reading to Trainable Level Retarded Students

100

Copyright 1972

Reading

Brown, L. and Perlmutter, L. Teaching Functional Reading to Trainable Level Retarded Students. Education and Training of the Mentally Retarded, April, 1971.

100.

Reading

Brown, Lou and Huppler, Barbara
*Use of the "College Bowl" Format to Increase Silent Reading Comprehension. Univer*sity of Wisconsin and Madison Public Schools.

100

Curriculum for Mentally Retarded Children Volume I - Trainable (extracts) Austin Independent Schools, Texas, 1964.

100

Reading

Cegelka, Patricia A. and Cegelka, Walter J.
A Review of Research: Reading and the Educable Mentally Handicapped

100

Reading

Busse, L. L. & Henderson, H.S. "Effects of contingency management upon reading achievement of junior high educable mentally retarded students." Education and Training of the Mentally Retarded, April 1972, 7(2), pp. 67-73.

100

Bahr and Shuey
Trainable Curriculum Guide (Extracts)

150

Handwriting

Guralnick, Michael J. (Ph.D.)
Alphabet Discrimination and Distinctive Features: research review and educational implications,
Volume 5, Number 7, August/September, 1972.

150

Writing

Schattner, R.
Learning to Write
An Early Childhood Curriculum for Multiply
Handicapped Children

150

70

Bahr & Shuey
Trainable Curriculum Guide (Extracts)

200

Language

Blue, C.M.
The Effectiveness of a Group Language Program
with T.M.R. Children
Education and Training of the Mentally Retarded
Vol. 5

200

Copyright 1970

Language

Borreca, F. and Burger, R.
A Functional Core Vocabulary for Slow Learners
Goldstein and R. Simches

200

Bricker, W.A. and Bricker, D.D.
A Program of Language Training for the Severely
Language Handicapped Child.
Exceptional Children

200

Copyright Oct. 1970

Language

Bricker, W.A. and Bricker, D.D.
A Program of Language Training for the Severely
Language Handicapped Child
Exceptional Children

200

Copyright 1970

Language

Brown, Lou and Bellamy, Tom
Development of Selected Pre-reading Skills in
Young Trainable Students, University of Wisconsin
and Madison Public Schools, 1971.

200

Brown, Lou and Huppler, Barbara
Teaching Young Trainable Students to
Report Behavioral Events

200

Copyright

Language

Chalfant, James, Kirk, G., Jensen, K. Systematic Language Instructions: An Approach for Teaching Receptive Language to Young Trainable Children. Teaching Exceptional Children, Fall 1968.

200

Language

Drucker, Howard
Language Development for the T.M.R.
Preschool Child
Special Education Division in the San Luis
Obispo, California, County Schools

200

Copyright 1970

Arco Publishing Co., Inc.
Workshop Ideas
Arco Publishing Co., Inc.

301
A701

Copyright

Teaching Technique

Balthazar, E.E.
Residential Programs in Adaptive Behavior for the Emotionally Distrubed More Severely Retarded
Mental Retardation

300

Copyright June 1972

Instructional Considerations

Baroff, George S.
Mental Retardation: nature, cause and management

302
B85

Copyright 1974

Behaviordelia, Inc.
An Introduction to Behavior Modification
Behaviordelia, Incorporated
Edmark Associates

302
B229

Copyright 1973

Teaching Techniques

Becker, Wesley C.
Parents are Teachers (A child Management Program)
GROUP LEADER'S GUIDE
Department of Special Education, University of Oregon

302
B224

Copyright 1971

Teaching Techniques

Becker, Wesley C.
Parents are Teachers (A Child Management Program)
Department of Special Education, University of Oregon

302
B223

Copyright 1971

Birnbrauer, J.S. and Wolf, M.
Classroom Behavior of Retarded Pupils with Token Reinforcement
Journal of Experimental Child Psychology 2

300

Copyright 1965

Teaching Technique

Berns, Jacqueline
Uses of Accountability: Voucher Payment (The)
A Practical Resource for Extending Services to Atypical Children
The Training School Bulletin, 69

300

Copyright Nov. 1972

Teaching Techniques

Behaviordelia, Inc.
Contingency Management in Education
Behaviordelia, Inc.
Edmark Associates

302
B231

Copyright 1972

Adapting the Special Fitness Test for TMR
AAHPER

350

Copyright 1971

Physical Education & Recreati
Bibliography
Educational Materials & Resources

Adult Mentally Retarded and Contributions of Physical Education and/or Recreation to Social Development of Mentally Retarded. AAHPER

350

Physical Education
& Recreation.

American Association for Health, P.E. and Recreation
Physical Education and Recreation for the Mentally Retarded
Washington, D.C., 1967

Arts & Crafts Program Features Are Described by Consultant

350

Physical Education
& Recreation

Andres, C.
Summary of a Report on the Status of Municipal
Recreation for the Mentally Retarded
AAHPER
1201 16th Street, N.W., Washington, D.C. 20036

350

Physical Education &
Recreation

American Association for Health, Physical Education
and Recreation
The Best of Challenge
American Association

Book Of Proceedings of Workshops held on Physical
Education for the Mentally Retarded. USOE 1967

350

Copyright 1967

Physical Education
& Recreation

Best of Challenge (The) AAHPER

350

Copyright 1971

Physical Educati

Balance
Scale of Activities:
1. Seat Balance
2. Tiptoe Balance Examples

350

Arts and Crafts

AAHPER
Dance, Music, Arts and Crafts for the Handicapped

400

Copyright 1970

Bibliography

A Selected Bibliography on Work Evaluation

400

Bibliographies

American Guidance Service, Inc.
Tests/Instructional Programs/
Educational Materials
American Guidance Service, Inc.

401
A507

Copyright 1975

American Guidance Service, Inc.
Exceptional Children
American Guidance Service, Inc.

401
A512

Copyright 1975 (Jan.)

Bibliographies

American Guidance Service, Inc.
Exceptional Children
American Guidance Service, Inc.

401
A510

Copyright 1974 (Nov.)

Bibliographies

American Guidance Service, Inc.
Exceptional Children
American Guidance Service, Inc.

401
A508

Copyright 1974 (Sept.)

American Psychological Association
Publication Manual (Second Edition)
G & C Merriam Company

401
A538 Copy 3 Copyright 1974

Bibliographies

American Psychological Association
Publication Manual of the American
Psychological Association
American Psychological Association

401
A538 Copy 2 Copyright 1974

Bibliographies

American Psychological Association
Publication Manual (Second Edition)
G & C Merriam Company

401
A538 Copy 1 Copyright 1974

Academic Curriculum

450

Copyright

Curriculum

Buffalo Public Schools
Division of Curriculum Evaluation & Development
Occupational Education Curriculum Guide for the
Secondary Mentally Retarded

450

Copyright 1969

Curriculum

Commonwealth of Pennsylvania
Curriculum Guide for Early
Education of the Handicapped
Commonwealth of Pennsylvania

456
C550

Copyright 1973-1974

Commonwealth of Pennsylvania
ESEA Title III 1973 Pace in
Pennsylvania
Commonwealth of Pennsylvania

456
C561

Copyright 1973

Curriculum

Cox, Eunice W. and Winters, Stanley A.
Implementing an Evaluative-Prescriptive Approach to Curriculum for TMR Children
Abstract: This article describes an "evaluative-prescriptive" approach to curriculum planning for trainable mentally retarded children, emphasizing the teacher's key role as evaluator-prescriptor-implementer. It reports some teacher reactions and suggests furter direction and purpose for this approach.

450

Curriculum

D'Amelio, Dan
Severely Retarded Children: Wider Horizons
Charles E. Merrill Publishing Company

459
D101

Copyright 1971

Elwyn Institute
General Class Program
Curriculum Guidelines
(Special Education Programs)
Elwyn Institute

462
E310

Copyright

Curriculum

Elwyn Institute
Academic Curriculum Guidelines
Elwyn Institute

462
E120

Copyright

Curricula

Dinola, Kaminsky and Sternfield
TMR Performance Profile
Reporting Service for Children, Ridgefield, N.J.

75

American Education
United State Department of Health, Education
and Welfare, Office of Education

500

Copyright 1973

Educational
Materials
& Resources

Berkowtiz, A.J.
Selected Materials for Teaching the Trainable
Mentally Retarded
NEMIC, Boston University School of Education

500

Copyright 1970

Educational
Resources
& Materials

Commercial Materials for the Visually Handicapped
USOE/MSU Regional Instructional Materials Center
for Handicapped Children and Youth

500

Cuisenaire Rods Kit (1969) Part II
Photo Text Guide-Jessica Davidson

Geoboard Activity Classroom Kit (1971)
Teacher guide-John Trivett

500

Educational Materials

Edmark Associates
Special Education Materials - 1976

500

Educational
Materials
& Resources

Edenark Associates
(Brochure and Extract)
Seattle, Washington

500

Education Research Resources Center
Information and Research Report
College of Education
University of Saskatchewan
Saskatoon, Canada

500

Copyright 1974

Educational Materials & Resourc

Goldbert, I. Ignacy
Toward a Systematic Approach to Educational Planning for the TMR

Abstract: Paper begins with a brief history on the development of educational provisions for the trainable mentally retarded and is followed by a summary of conclusions concerning research stuides that deal with the effectiveness of special classes. A theoretical model of a systematic approach to educational planning for the trainable mentally retarded has been presented.

500

Educational
Materials &
Resources

Kates, Steven M.
The Special Educator's Index of Free Materials
Journal for Special Educators of the Mentally
Retarded

Arthur, Julietta K.
Employment for the Handicapped

801
A712

Copyright 1967

Lib.

Avedon, Elliott M.
Socio-Recreation Programming for the Retarded

801
A827

Lib.

Baumgartner, Bernice B.
Administrating Classes for the Retarded: What Kinds of Principals and Supervisors are Needed?

802

Baumgartner, Bernice B.
Guiding the Retarded Child

802
B209
Cop. 1 & 2

Lib.

Boom, Alfred B.
Studies on the Mentally Handicapped Child

802
B444

Lib.

Bradley, Betty Hunt
Teaching Moderately and Severely Retarded Children

802
B595

Browning, Philip L.
Evaluation of Short-Term Training in Rehabilitation
Rehabilitation Research and Training Center in Mental Retardation
University of Oregon, Eugene

802
B605

Copyright 1970

T.M.R.

Browning, Philip L.
Mental Retardation Rehabilitation and Counseling
Charles C Thomas -Publisher,
Springfield, Illinois

802
B645

Copyright 1974

TMR

Bureau of Industrial Education
Apprenticeship Handbook for Educators

802
B825

Copyright 1974

American Printing House for the Blind
Teachers' Guide for Development of Visual
Learning Abilities Utilization of Low Vision.

750

Perceptual Considerations

Elwyn Institute
Articulation and Speech Improvement Programs
Elwyn Institute

759
E450

Copyright

Perceptual Considerations

Elwyn Institute
Developing Basic Speech Patterns
Elwyn Institute

759
E455

Copyright

Evans, Ellis D.
Contemporary Influences in Early Childhood Education
Holt, Rinehart and Winston Inc., New York

750 Copyright 750

Perceptual Considerations

Feldman, S. Shirley and Crockenberg
A Profile of Cognitive Development in Children

750 Copyright 1969

Perceptual Considerations

Gitter, Lena L.
The Montessori Approach to Special Education
Baltimore Chapter: Maryland Association for Retarded Children, Inc.

750 Copyright 750

Glitter, Lena L.
Montessori: A Therapeutic Toll for the
Mentally Retarded Child

750

Perceptual Considerations

Lewis, M. Goldberg, S. and Rausch M.
Novelty and Familiarity as Determinants of
Infant Attention within the First Year
National Institute of Mental Health

750

Copyright 1966

Perceptual
Considerations

Media Centers for the Deaf
Newsletter

700

Checklists

American Association on Mental Deficiency
AAMD Adaptive Behavior Scales

700

Checklists

Blanchard, I. and Beard, C.
A Program in Basic Communication Development for Retarded Blind Children
(Extract)
Journal of Special Education, Volume 2, No. 3

Glitter, Lena L.
Montessori: A Therapeutic Toll for the
Mentally Retarded Child

750

Perceptual Considerations

Lewis, M. Goldberg, S. and Rausch M.
Novelty and Familiarity as Determinants of
Infant Attention within the First Year
National Institute of Mental Health

750

Copyright 1966

Perceptual
Considerations

Media Centers for the Deaf
Newsletter

Burrill, Lois E., Test Department
How a Standardized Achievement Test is Built
Test Service Notebook 125
The Test Department, Harcourt Brace Jovanovich, Inc.

700 Copyright

Checklists/Testing

Communication/Checklist

700

Checklists/Testing

DiNola, Kaminsky and Sternfield
Social Behavior (TMR Performance Profile)
Reporting Service for Children

708 Copyright
D301

Evaluation Checklist for the Severely and Profoundly Retarded

700

Checklists
Evaluation

Evaluation Sheet for Parent-Teacher Conference

700

Copyright 1972

Checklist

Foster, W. Ray
Camelot Behavioral Checklist

700

Aiello, Roger
"A Guide to the Preplacement Counseling
of Parents of Educable Mentally Retarded Children"
Western Pennsylvania Special Education Regional
Resource Center

600

Copyright 1971

Interpersonal
Relations

Chalfant, J.E. and Silikovitz, R.G.
Systematic Instruction for Retarded Children:
The Illinois Program-Part I Teacher Parent Guide
HEW

600

Copyright 1970

Interpersonal Relations

Demanczyk, Russell
Materials from Mr. Russell Demanczyk

Ingram, C.P.
Education of the Slow-Learning Child
Ronald Press Company, New York

600

Interpersonal Relations

Love, Harold D.
Parental Attitudes Toward
Exceptional Children
Charles C Thomas Publisher

600

Copyright

Interpersonal
Relations

McDonald, Eugene T.
Understand Those Feelings
Stanwix House, Inc., Pittsburgh
Regional Resource Center

600

Interpersonal
Relations

Phillips, Maxine
Living with the Retarded
New Readers Press

600

Copyright 1971

Fotheringham
Retarded Child and His Family (The)
Chapter 7 The Implications

550

Medical Consideratio

Fotheringbam, John B.
Preventing Mental Retardation
What you and your Local Association Can Do
Ontario Institute for Studies in Education

550

Copyright 1972

Environmental
Considerations

Gold, Marc W.
An End to the Concept of Mental Retardation:
Illinois Association for the Mentally Retarded
Springfield, Illinois

550

Copyright 1973

Dittman, Laura L.
The Mentally Retarded Child at Home
(A manual for parents)
U.S. Department of Health
Education, and Welfare Social, and
Rehabilitation Service (Children's Bureau)

556
D250

Copyright 1962

Environmental
Considerations

Fatheringham, Skelton, Hoddinott
Monograph Series II
The Retarded Child and His Family
The Outland Institute for Studies in Education

550

Copyright 1971

Medical
Considerations

Federal Source Book (A): answers to the most
frequently asked questions about drug abuse

550

Baumgartner, B.B.
Helping the Trainable Mentally Retarded Child
Teacher's College Press

550

Educational Materials &
Resources

Cratty, Bryant J.
Active Learning Games to Enhance Academic
Abilities
Prentice-Hall, Inc.
Englewood Cliffs, New Jersey

553
C735

Medical
Considerations

Dicarlo, L.M.
Differential Diagnosis of Congenital Aphasia
Volta Bureau, Washington, D.C.

Goodfellow, Robert A.
Group Homes-One Alternative
Human Policy Press

559
G561 Copy 2

Copyright 1974

Medical Considerations

Grinspoon, L., & Singer, S.B. Amphetamines in the treatment of hyperkinetic children. Harvard Educational Review, November 1973.

550

Environmental
Considerations

Hart, Jane and Jones, Beverly
Where's Hannah? A Handbook for Parents
and Teachers of Children with Learning Disorders
Hart Publishing Company, Inc.

560
H101

Copyright 1968

Hill, Paul L.
Solving Behavior Problems
The Instructor Publications

560
H399

Copyright 1973

Medical Considerations

Insurance for Retardates
National Insurance Trusts
Application Plan

550

Environmental
Considerations

Ingram, C.P.
Education of the Slow-Learning Child
(Extracts)
Ronald Press Company, New York

550

Jones, B. and Hart, J.
Where's Hannah? Hart

550 Copyright 1968

Medical
Considerations

National Association for Retarded Citizens
Your Head is Your Own Thing, but.......

550

Environmental
Considerations

National Clearinghouse for Drug Abuse
Information
A Federal Source Book: Answers to
the most frequently asked questions about
drug abuse
National Clearinghouse for Drug Abuse

550 Copyright 1971

APPENDIX E

SAMPLE PAGES FROM DRESSING SKILLS PROGRAM

TRAINING FOR INDEPENDENCE

A sequential program of daily living skills for
the developmentally young

Volume I
[illegible] and Footwear

Principal Investigator
Dr. Lester Mann
Director of Special Education

Authors

[illegible] Director

Sheila M. [illegible]
Research Associate

Marion L. Hilbach
Research Associate

INSTRUCTIONS ON HOW TO FOLLOW THE PROGRAM IN ANY SELECTED AREA

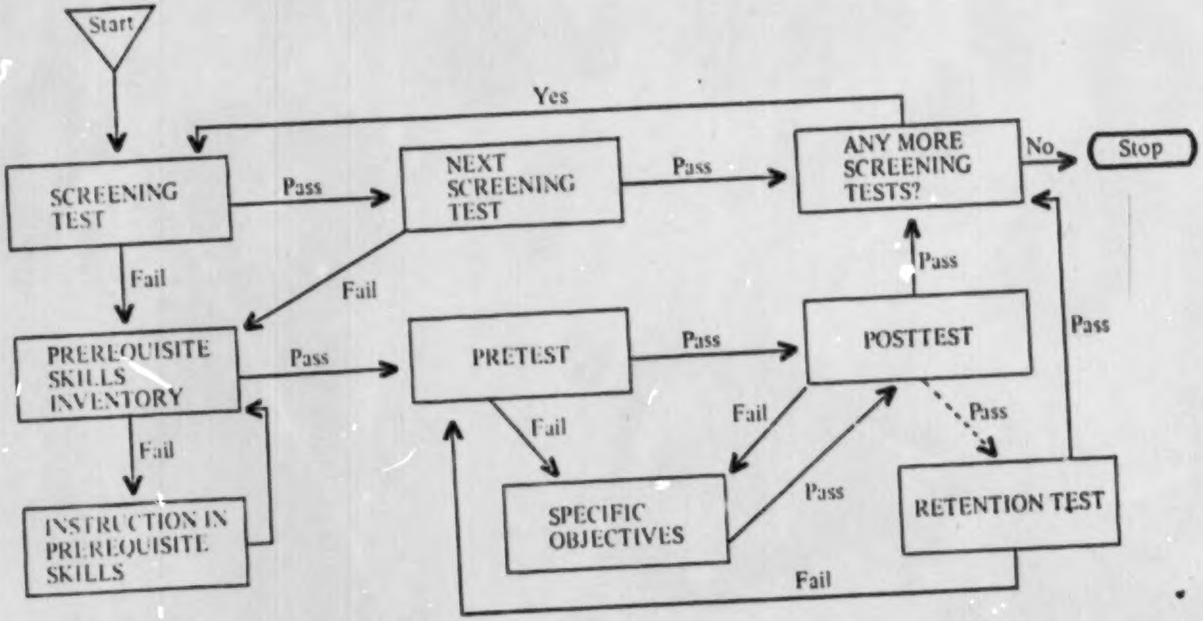

Start
Yes
SCREENING TEST
Pass
NEXT SCREENING TEST
Pass
ANY MORE SCREENING TESTS?
No
Stop
Fail
Fail
Pass
PREREQUISITE SKILLS INVENTORY
Pass
PRETEST
Pass
POSTTEST
Pass
Fail
Fail
Fail
Pass
INSTRUCTION IN PREREQUISITE SKILLS
SPECIFIC OBJECTIVES
Pass
RETENTION TEST
Fail

TABLE OF CONTENTS

DRESSING SKILLS

Underwear

Page
01 Bra on 1
02 Bra off 5
03 Full length slip on 8
04 Full length slip off 12
05 Garter belt on 15
06 Garter belt off 18
07 Girdle on 21
08 Girdle off 26
09 Half-slip on 29
10 Half-slip off 32
11 Pullover shirt on 35
12 Pullover shirt off 40
13 Underpants on 44
14 Underpants off 47

Footwear

15 Shoe/boot on 50
16 Shoe/boot off 55
17 Sock on 58
18 Sock off 61
19 Stocking on 64
20 Stocking off 68
21 Tights/pantyhose on 71
22 Tights/pantyhose off 75

* * *

PUTTING ON UNDERPANTS

SCREENING TEST 13

Preparation: If appropriate, have a mirror available for child's use.

GIVE THE CHILD THE UNDERPANTS
TELL THE CHILD TO PUT ON THE UNDERPANTS

You may not assist nor prompt child in any way.

If the child IS ABLE to put on the article of clothing without assistance or prompting, mark the recording sheet accordingly. Go on to a screening test in another area.

If the child IS UNABLE to put on the article of clothing without assistance or prompting, give him the prerequisite skills inventory (see manual). Instruct him in the prerequisite skills needed, then continue to pretest 13.

PRETEST 13

All items must be given in sequence before continuing to specific objectives.

The teacher may use any technique appropriate to the child (for example, by demonstrating, gesturing or giving verbal instructions). Refer to the manual for further information.

	Specific Objective Reference
1. **Child puts right leg through right leg opening.**	1301
If successful, continue to item 2.	
If unsuccessful, put child's leg through right leg opening and continue to item 2.	
2. **Child puts left leg through left leg opening.**	1302
If successful, continue to item 3.	
If unsuccessful, put child's leg through left leg opening and continue to item 3.	

3. **Child pulls underpants up to waist.** **1303**

If successful, refer to specific objectives missed on the pretest and instruct accordingly.

If unsuccessful, pull child's underpants up to his/her waist. Refer to specific objectives missed on the pretest and instruct accordingly.

Specific Objective 1301

Put right leg through right leg opening

Preparation: Have a piece of furniture available for child to use for support.

Note: If a left-handed child has problems starting with right leg, do 1302 before 1301.

1. With right hand, grasp right side of pants at waistband, thumb to inside.
2. With left hand, grasp left side of pants at waistband, thumb to inside.
3. Lower pants to a comfortable height above feet.
4. Raise right foot to point above waist opening.
5. Lower right foot into waist opening.
6. Guide foot towards leg opening, keeping foot close to right hand.
7. Push right foot through right leg opening.

Specific Objective 1302

Put left leg through left leg opening

Preparation: Child should have completed objective 1301.

1. Place right foot firmly on floor.
2. Maintain grasps of waistband at sides.
3. Raise left foot to a point above waist opening.
4. Lower left foot into waist opening.
5. Guide foot towards left leg opening, keeping foot close to left hand.
6. Push left foot through left leg opening.

Specific Objective 1303

Pull underpants up to waist

Preparation: Child should have completed objectives 1301 and 1302.

1. Maintain grasps of waistband at sides.
2. Pull underpants up to mid-thigh.
3. either a. Stand and pull underpants up to waist.
   or b. Lean against furniture or wall for support and pull underpants up to waist.
   (Hips must be clear of furniture or wall.)

POSTTEST 13

Preparation: Have a mirror and a piece of furniture available for child's use.

GIVE THE CHILD THE UNDERPANTS
TELL THE CHILD TO PUT ON THE UNDERPANTS

As he completes successfully each item listed below, mark the recording sheet accordingly. Do not assist nor prompt him in any way.

If he is unable to complete any item, refer to the specific objectives missed on the posttest and instruct accordingly.

If he completes all items successfully, continue to a screening test in another area.

1. **Child puts right leg through right leg opening.**
2. **Child puts left leg through left leg opening.**
3. **Child pulls underpants up to waist.**

RETENTION TEST 13

Preparation: If appropriate, have a mirror and a piece of furniture available for child's use.

GIVE THE CHILD THE UNDERPANTS
TELL THE CHILD TO PUT ON THE UNDERPANTS

You may not assist nor prompt child in any way.

If the child IS ABLE to put on the article of clothing without assistance or prompting, mark the recording sheet accordingly. Return to the current area of the program.

If the child IS UNABLE to put on the article of clothing without assistance or prompting, return to pretest 13.

* * *

TAKING OFF UNDERPANTS

SCREENING TEST 14

Preparation: Child must have underpants on. If appropriate, have a mirror available for child's use.

TELL THE CHILD TO TAKE OFF THE UNDERPANTS

You may not assist nor prompt child in any way.

If the child IS ABLE to take off the article of clothing without assistance or prompting, mark the recording sheet accordingly. Go on to a screening test in another area.

If the child IS UNABLE to take off the article of clothing without assistance or prompting, give him the prerequisite skills inventory (see manual). Instruct him in the prerequisite skills needed, then continue to pretest 14.

PRETEST 14

All items must be given in sequence before continuing to specific objectives.

The teacher may use any technique appropriate to the child (for example, by demonstrating, gesturing or giving verbal instructions). Refer to the manual for further information.

	Specific Objective Reference
1. Child pushes underpants down to mid-thighs.	1401

If successful, continue to item 2.

If unsuccessful, push child's underpants down to mid-thighs and continue to item 2.

2. **Child pushes underpants down to ankles.** **1402**

   If successful, continue to item 3.

   If unsuccessful, push child's underpants down to ankles and continue to item 3.

3. **Child lifts right foot out of leg opening.** **1403**

   If successful, continue to item 4.

   If unsuccessful, lift child's right foot out of leg opening and continue to item 4.

4. **Child lifts left foot out of leg opening.** **1404**

   If successful, refer to specific objectives missed on the pretest and instruct accordingly.

   If unsuccessful, lift child's left foot out of leg opening. Refer to specific objectives missed on the pretest and instruct accordingly.

Specific Objective 1401

Push underpants down to mid-thighs

Preparation: Child must have underpants completely on.

1. With right hand, grasp right side of underpants at waistband, thumb to inside.
2. With left hand, grasp left side of underpants at waistband, thumb to inside.
3. Maintaining grasp, push underpants down to mid-thighs.

Specific Objective 1402

Push underpants down to ankles

Preparation: Child should have completed objective 1401. Have a piece of furniture available for child's use.

1. If appropriate, child may sit down.
2. Grasp pants by sides at waistband with thumbs to inside.
3. Push pants down to ankles.

Specific Objective 1403

Lift right foot out of leg opening

Preparation: Child should have completed objectives 1401 and 1402.

1. Lift right foot.
2. Use left hand to grasp waistband behind right heel.
3. Push material over right heel.
4. Lift right foot out of leg opening.

Specific Objective 1404

Lift left foot out of leg opening

Preparation: Child should have completed objectives 1401 to 1403.

1. Lift left foot.
2. Use right hand to grasp waistband behind left heel.
3. Push material over left heel.
4. Pull pants off left foot.

POSTTEST 14

Preparation: Child must have the article of clothing completely on.

TELL THE CHILD TO TAKE OFF THE UNDERPANTS

As he completes successfully each item listed below, mark the recording sheet accordingly. Do not assist nor prompt him in any way.

If he is unable to complete any item, refer to the specific objectives missed on the posttest and instruct accordingly.

If he completes all items successfully, continue to a screening test in another area.

1. Child pushes underpants down to thigh.
2. Child pushes underpants down to ankles.
3. Child lifts right foot out of leg opening.
4. Child lifts left foot out of leg opening.

RETENTION TEST 14

Preparation: Child must have the underpants on. If appropriate, have a mirror available for child's use.

TELL THE CHILD TO TAKE OFF THE UNDERPANTS

You may not assist nor prompt child in any way.

If the child IS ABLE to take off the article of clothing without assistance or prompting, mark the recording sheet accordingly. Return to the current area of the program.

If the child IS UNABLE to take off article of clothing without assistance or prompting, return to pretest 14.

* * *

PUTTING ON A SHOE/BOOT

SCREENING TEST 15

Preparation: If appropriate, have a mirror available for child's use.

GIVE THE CHILD THE SHOE/BOOT
TELL THE CHILD TO PUT ON THE SHOE/BOOT

You may not assist nor prompt child in any way.

If the child IS ABLE to put on the article of clothing without assistance or prompting, mark the recording sheet accordingly. Go on to a screening test in another area.

If the child IS UNABLE to put on the article of clothing without assistance or prompting give him the prerequisite skills inventory (see manual). Instruct him in the prerequisite skills needed, then continue to pretest 15.

PRETEST 15

Preparation: Have a chair available for child's use.

All items must be given in sequence before continuing to specific objectives.

The teacher may use any technique appropriate to the child (for example, by demonstrating, gesturing or giving verbal instructions). Refer to the manual for further information.

APPENDIX F

SAMPLE MATERIAL FROM
ACADEMICS PROGRAM

ACADEMIC CURRICULUM

SKILL AREA

I. PREACADEMIC SKILLS

1. Attending behavior
2. Responding to name
3. Pointing on verbal command
4. Touching on verbal command
5. Picking up on verbal command
6. Yes/No response
7. Left to right eye movement
8. Up and down eye movement

II. FUNDAMENTAL SKILLS

9. Matching
10. Same and different
11. Color
12. Shape
13. Size
14. Matching by color, shape and size

III. LANGUAGE ARTS

15. Letters of the alphabet
16. Alphabetical order
17. Verbs
18. Nouns
19. Miscellaneous words
20. Pronouns
21. Adverbs
22. Prepositions
23. Conjunctions
24. Functional words and phrases
25. Interrogatives
26. Opposites
27. Rhyming words
28. Plurals

IV. NUMBER WORK

29. Numerals 1 - 20
30. Number concepts
31. Rote counting 1 - 20
32. Matching numerals to corresponding objects
33. Grouping objects
34. Words relating to concepts of time
35. A clock and it's parts
36. Telling time by the hour and half-hour
37. Important time of the day

38. A calendar and it's parts
39. Months, days and dates
40. Limited use of the calendar
41. Coins
42. Value of coins
43. Paper money
44. Value of paper money
45. Simple change making
46. Quantity management

V. HANDWRITING

47. Defined markings
48. Tracing letters
49. Drawing lines and shapes
50. Letters of the alphabet

Appendix F includes the final draft of the Table of Contents for the Academic Curriculum. It consists of five instructional areas: I. Preacademic Skills, II.. Fundamental Skills, III. Language Arts, IV. Number Work, V. Handwriting. There will be fifty task analyzed lesson plans, covering the learning material deemed relevant to a basic TMR educational curriculum. The majority of Skill Area formats will be sample lesson plans, describing in detail how to teach a specific skill. There will be explicit directions for the teacher on how to expand each lesson to aid students in working towards their full potential.

There is a bibliography for the teacher's convenience, reference pages for more advanced programs in Language Arts and Mathematics, and suggested professional materials to be used in reinforcing academic cognition. The Language Arts unit includes a TMR Functional Vocabulary List, a word list by subject area, a word list by difficulty level and a spoken word count of TMR Vocabulary List.

The lesson plans contained in Appendix F are first drafts, and are in the process of being revised and edited. This material is being used as a guide in developing an academic curriculum that encourages a retarded student to find success and accomplishment in a school environment. The main purpose of further revisions is to have a completed curriculum as concise and consistent as possible. Toward this goal,the staff is rewriting each lesson plan and working in cooperation with experienced TMR teachers in field testing the new material. There will be an introduction to each instructional area, pre- and posttests for each lesson, evaluation sheets, and a separate Manual to help parents and/or guardians work with students outside the classroom.

The work begun by the project "Curricular Reorganization of Trainable Mentally Retarded Classes" (ESEA Title III FI 72021H-46) is being continued by "A Model for T.M.R. Employment" (ESEA Title III 7400-1H) and is expected to be completed at the termination of the aforementioned project.

An edited version of the Handwriting chapter (V.) will be found at the end of the enclosed material. This is not a final revision, but is an example of the type of work being done in the Academic curriculum.

V. HANDWRITING

Page

Rationale
Curriculum
Techniques
Tests
Hand Dominance
Physical Readiness
Preparation for Writing
Materials
Skill Area 47 - Defined Markings
Skill Area 48 - Tracing Letters
Printing Readiness
Skill Area 49 - Drawing Lines and Shapes
Graphics Suggestions
Skill Area 50 - Printing Letters of the Alphabet
Teacher Aids

V. HANDWRITING

Rationale

Teaching retarded children how to print can be a long and involved process, which may not always lead to successful results. There are sources which maintain that writing is of little practical value to TMR's and should be ignored in a curriculum aimed at this population. This chapter is included for the following reasons:

1. It is considered necessary that Trainable Mentally Retarded students learn to write their own names, addresses, telephone numbers and social security numbers for personal safety and employment purposes.
2. Handwriting is a concrete way to improve eye-hand coordination and left-to-right eye progression.
3. Reinforcement of letters, numerals and words can be stressed.
4. Greater control of arm and hand muscles can be taught.
5. Personal satisfaction is gained from being able to put even one's simplest ideas and needs down on paper in a form recognizable to others.

The teacher should attempt to instruct the class, using systematic and success-oriented methods towards the goal of legible handwriting. Some students will not achieve this goal, while many will be capable of writing reasonably well. The teacher must judge how much instruction each student is capable of mastering. An entire handwriting program is included for those who are able to successfully complete it.

Curriculum

Handwriting should be an integral part of an academic curriculum and should be taught in two ways: as an individual skill activity; as part of Language Arts, Mathematics and Prevocational instruction. This program aims to serve both approaches. Specific handwriting lessons are included in this chapter, and references are given to other Skill Areas where handwriting can be integrated into the curriculum for reinforcement and additional learning activities.

Techniques

It is recommended that the teacher always try to work individually with each child in a quiet area with minimal distractions. If this is not feasible, small groups of three or four children can be taught at the same time, giving each person as much individual attention as possible. This program does not advocate any specific teaching technique, but asks the teacher to judge which methodology would be most advantageous in helping individual students perform successfully in the program. For a detailed description of the most widely used techniques, please refer to the Manual.

Tests

A series of Pre- and Posttests accompany this portion of the curriculum. These should be used to measure and assess the progress of each student. There is a progression of difficulty built into the program and the teacher, by administering the tests, will ensure that more advanced activities are not introduced until simpler ones have been mastered. It is important that the child does not become frustrated and that he fails as infrequently as possible.

Hand Dominance

Before beginning a handwriting program, the instructor must determine which hand is dominant for each child. The student should be observed for several days, and rated on his hand preference while eating, dressing and playing. An informal test can be given to confirm these observations. This can be as simple as handing the child a crayon or toy, and recording the hand with which he reaches out and grasps it.

Physical Readiness

Each child should have many opportunities to develop his physical readiness prior to beginning a handwriting program. Several suggestions are given here, and the teacher is encouraged to introduce any games or activities which will strengthen the skills needed for printing successfully.

1. Left-to-right eye movement: following a puppet and/or object from left to right only with the eyes, following a pointer on the chalkboard, looking from one designated spot to another without losing attention.

2. Eye-hand coordination: completing simple, manual puzzles, placing pegs in a peg board, tossing bean bags into a receptacle, catching a large ball, touching objects on command.

3. Large muscle control: using finger paints, drawing in wet sand, molding clay, drawing shapes in the air, scribbling on large sheets of paper, playing games which involve hand and arm movements (e.g. "London Bridge is Falling Down", "Simon Says", "If You're Happy And You Know It".)

4. Fine muscle control: tearing paper, painting with a brush, pasting, drawing with a crayon, lacing cards, playing finger games (e.g. "Eensie-Weensie Spider", "Open Shut Them", "There Was a Little Turtle".)

Preparation for Writing

The child should be observed while holding a writing implement, using a pincer grasp, exerting pressure when making marks on a paper, and sitting in a chair at a table or desk. If any of these behaviors need correction, they should be modified before handwriting lessons begin. The writing implement is held between the thumb and index finger, resting on the third finger. The writing hand rests on the curved last finger, the arm and hand placed loosely on the flat writing surface. If the child has difficulty grasping the pencil or crayon, a rubberband or small strip of clay can be wrapped around it at the place where it is most comfortably held. If the implement is grasped too tightly, a small ball of tissue paper can be placed in the palm to loosen the grasp.

When sitting at a table or desk, both feet are flat on the floor, back straight against the chair, head up, and both arms on the flat writing surface. The elbow of the writing arm is just off the edge of the desk. The paper is directly in front of the child, held at the top corner with the non-dominant hand. If coordination is lacking, the paper can be taped to the desk or table to keep it from slipping.

Materials

A wide variety of materials should be available to aid the child in developing legible printing. In preparation, the student should have the opportunity to work with puzzles, peg boards, blocks, puppets, finger paints, clay, paste, scissors, lacing cards, and poster paints. For actual printing, he will need large sandpaper, beaded, and/or wooden letters and numerals, newsprint, large crayons, soft lead pencils, tracing paper, one-inch ~~square~~ spaced lined primary paper, and teacher-made tracing and coloring ditto sheets.

SKILL AREA 47

OBJECTIVE: To Make a Vertical Line

TERMINAL BEHAVIOR: To make a vertical line within a defined space.

PREREQUISITES: Skill Area #4 Touch, to hold a writing utensil.

GENERAL INSTRUCTIONS: When the child has shown a mastery of writing readiness tasks, he can begin making more defined markings. Show him how to make large freehand circles and lines, without using guide lines or arrows. Attach several large sheets of newsprint to the surface of the table or desk. Use masking tape on one side so that sheets may be torn off as they are used.

This is a sample lesson for making defined markings. Use this format for Skills 47.01 to 47.10.

This lesson may be integrated with Skill Area #11 Color, #12 Shape, #13 Size, and #14 Matching by color, shape, and size.

SETTING: A table or desk in a room with minimal distractions.

MATERIALS: Several large sheets of newsprint, masking tape, two crayons of different colors.

TEACHING STEPS:

1. Make a horizontal line across the paper with a crayon.
2. Make a vertical line through the horizontal one to form a large plus sign.
3. With index finger of child's dominant hand extended, guide him in tracing the vertical line.
4. Repeat step 3 several times.
5. Make a horizontal line across the paper with a crayon.
6. Give the child a crayon.
7. Take child's dominant hand and guide him in making a vertical line through the horizontal line.

Skill Area 47 - Teaching Steps (cont'd)

8. Repeat steps 5 to 7 several times.
9. Make a horizontal line across the paper with a crayon.
10. Use extended index finger to point to place where vertical line should go.
11. Say, "Make the up and down line through my line."
12. Repeat steps 9 to 11 until the child makes the vertical line correctly.
13. Make a horizontal line across the paper with a crayon.
14. Say "Make the up and down line through my line."
15. If the child makes the vertical line correctly on several trials, continue to the next Skill Area.

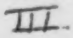
    If the child does not make the vertical line correctly, repeat the entire lesson until he is successful on several trials.

Skill Area 47.01 Teacher makes a vertical line and child makes a horizontal line through it. +

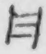
47.02 Teacher makes a slanted line and child makes a slanted line in the opposite direction through it. X

47.03 Same as 47.02, with teacher making line in opposite direction first. X

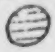
47.04 Teacher makes two parallel horizontal lines and child makes vertical lines between them.



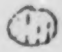
47.05 Teacher makes two parallel vertical lines and child makes horizontal lines between them.



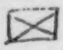
47.06 Teacher makes a large circle and child makes horizontal lines inside it.



47.07 Same as 47.06, with child making vertical lines inside the circle.



47.08 Teacher makes a square and child draws an X inside it.



47.09 Teacher makes large, simple shapes and child colors them in.

47.10 Teacher makes large simple shapes and child copies them.

SKILL AREA 48

OBJECTIVE: To trace the letter b

TERMINAL BEHAVIOR: To trace the printed letter b with an extended index finger.

PREREQUISITES: Skill Area #4 Touch

GENERAL INSTRUCTIONS: This is a sample lesson for tracing the letters of the alphabet. Use this format for each of the lower case and upper case letters, with particular stress on the ones which appear in the child's name. Extend the format to include the numerals 0 - 9. See Graphics Suggestions for formation of letters and numerals.

This lesson may be integrated with Skill Area #15 Letters of the Alphabet, and Skill Area #29 Numerals.

SETTING: A table or desk in a room with minimal distractions.

MATERIALS: Sandpaper letter b, large printed letter b

TEACHING STEPS:

1. Place sandpaper b in front of child.
2. Say "b".
3. Trace letter with extended index finger several times, saying letter name each time.
4. With index finger of child's dominant hand extended, guide him in tracing letter.
5. Say "b".
6. Allow child to trace configuration on sandpaper several times, being sure he makes the downward stroke first, followed by the curved movement. If child lacks coordination, continue to guide him in tracing letter.
7. Make letter b on the table with extended index finger several times.

Skill Area 48 - Teaching Steps (cont'd)

8. Say "b" each time.
9. With words or gestures, tell the child to trace the sandpaper letter b with his extended index finger each time the teacher does it on the table.
10. Say "b" each time he traces the letter.
11. Say "Trace the b."
12. If the child traces the sandpaper b correctly on several trials, go on to Step 13.

    If the child does not trace the sandpaper b correctly, repeat Steps 1 to 11 until he is successful on several trials.
13. Place the large printed letter b on the table.
14. Repeat steps 2 to 10, using the large printed letter.
15. Say "Trace the b."
16. If the child traces the printed b correctly on several trials, go on to the next letter to be taught.

    If the child does not trace the printed b correctly, repeat Steps 2 to 11 until he is successful on several trials.

Printing Readiness

Up to this point, each child has been getting his eyes, hands, arms, and muscles ready to begin actual printing. The games, activities, and lessons have been more fun than hard work. At this point, the teacher must judge whether or not the child has gained sufficient skill to begin writing letters and numerals. If he has not performed well and shown success in the foregoing activities it is suggested that the teacher stop the program and instruct him in learning to write his name, address and telephone number in upper case letters. This can only be accomplished by tracing, copying, constant practicing, and repetitive testing. The importance of these facts must be stressed by reinforcing the child's memory to write this information on verbal command.

With children who have been successful in the curriculum, the teacher should continue handwriting instruction. After tracing letters and numerals with an extended index finger (Skill Area #48), the student is ready to trace over pre-drawn shapes and lines. The use of heavy paper and a felt tip pen will aid the teacher in making distinct geometric shapes, lines, angles, and patterns. Tracing paper can then be taped on top of the teacher's page to help in practice lessons. An overhead projector pen or grease pencil might also be used on acetate sheets which have been taped over the instructional material. It is often advisable to use connecting dots, finger paints, chalk and other materials to help the child practice the formation of linear shapes and figures. If the student has difficulty in tracing, a colored dot or an arrow may be used to show him where to begin each marking.

When introducing letters of the alphabet, both upper and lower case letters should be taught and used correctly. It is recommended that the upper case letters be taught first, with special emphasis on signs, store names and product labels and reinforced in conjunction with the Language Arts program (Skill Area #15 Letters of the Alphabet). Lower case letters should be taught at a later time, and integrated with the portions of the Language Arts curriculum where they are most applicable.

Printing numerals may be combined with the Mathematics Curriculum, from the very beginning, as every lesson (Skill Areas #29 to 46) can involve written numerical symbols if the teacher so chooses.

There will be students who, at a later time, will be capable of learning to write their names in manuscript. This is not necessary as a legal signature, but may be introduced at the teacher's discretion. It is suggested that a reference, such as "Trainable Children" by Julia S. Malloy, The John Day Company, N. Y. 1973 be consulted on manuscript instruction.

SKILL AREA 49

OBJECTIVE: To make a horizontal line

TERMINAL BEHAVIOR: To make a horizontal line on one-inch Spaced ~~square~~ lined primary paper.

PREREQUISITES: Skill Area #4 Touch, to hold a writing utensil

GENERAL INSTRUCTIONS: This is a sample lesson for making linear figures. Use this format for Skills 49.01 to 49.06. Attach several large sheets of lined newsprint to the surface of the table or desk. Use masking tape on one side so that sheets may be torn off as they are used. These lessons should be repeated to reduce writing size by using primary paper and a pencil when the child can successfully complete them with newsprint and a crayon.

SETTING: A table or desk in a room with minimal distractions.

MATERIALS: Several large sheets of lined newsprint, masking tape, two crayons of different colors, several sheets of one-inch spaced ~~square~~ lined primary paper, two pencils.

TEACHING STEPS:

1. Make a horizontal line on a printed line with a crayon in the following way. •————•
2. With index finger of child's dominant hand extended, guide him in tracing the line from left to right several times.
3. Give the child a crayon.
4. Take the child's dominant hand and guide him in drawing over the horizontal line from left to right several times.
5. Make a dotted horizontal line on a printed line with a crayon in the following way. •–•–•–•–•
6. Take child's dominant hand and guide him in making a horizontal line through the dotted line several times.

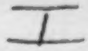
Skill Area 49 - Teaching Steps (cont'd)

7. Repeat Step 5.
8. Say "Make a line across the dots".
9. If the child makes the horizontal line correctly on several trials, go on to Step 10.

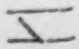
   If the child does not make the horizontal line correctly, repeat the entire lesson until he is successful on several trials.
10. Make two large dots on a printed line with a crayon in the following way. • •
11. Make the horizontal line between the dots.
12. Repeat Step 10.
13. Say "Make a line across."
14. If the child makes the horizontal line correctly on several trials, go on to the next Skill Area.

    If the child does not make the horizontal line correctly, repeat Steps 10 to 13 until he is successful on several trials.

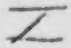
Skill Area 49.01 A vertical line between two printed horizontal lines.



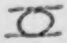
49.02 A slanted line between two printed horizontal lines.



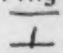
49.03 Same as 49.02 with line slanted in opposite direction.



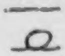
49.04 A circle between two printed horizontal lines.



49.05 A vertical line covering half the space between two printed horizontal lines.



49.06 A circle covering half the space between two printed horizontal lines.



Graphics Suggestions

The letters of the alphabet are often taught in groupings for similarity of form and shape. It is recommended that the more difficult letters be introduced after the student has shown success with the stick letters. Some teachers prefer to teach the letters of the child's name first, regardless of difficulty. The order of instruction is left to the teacher's judgement, with a suggested method presented if it is needed.

Upper case letters:

L T K I H F E   A X Y   V W   P R B D   M N Z

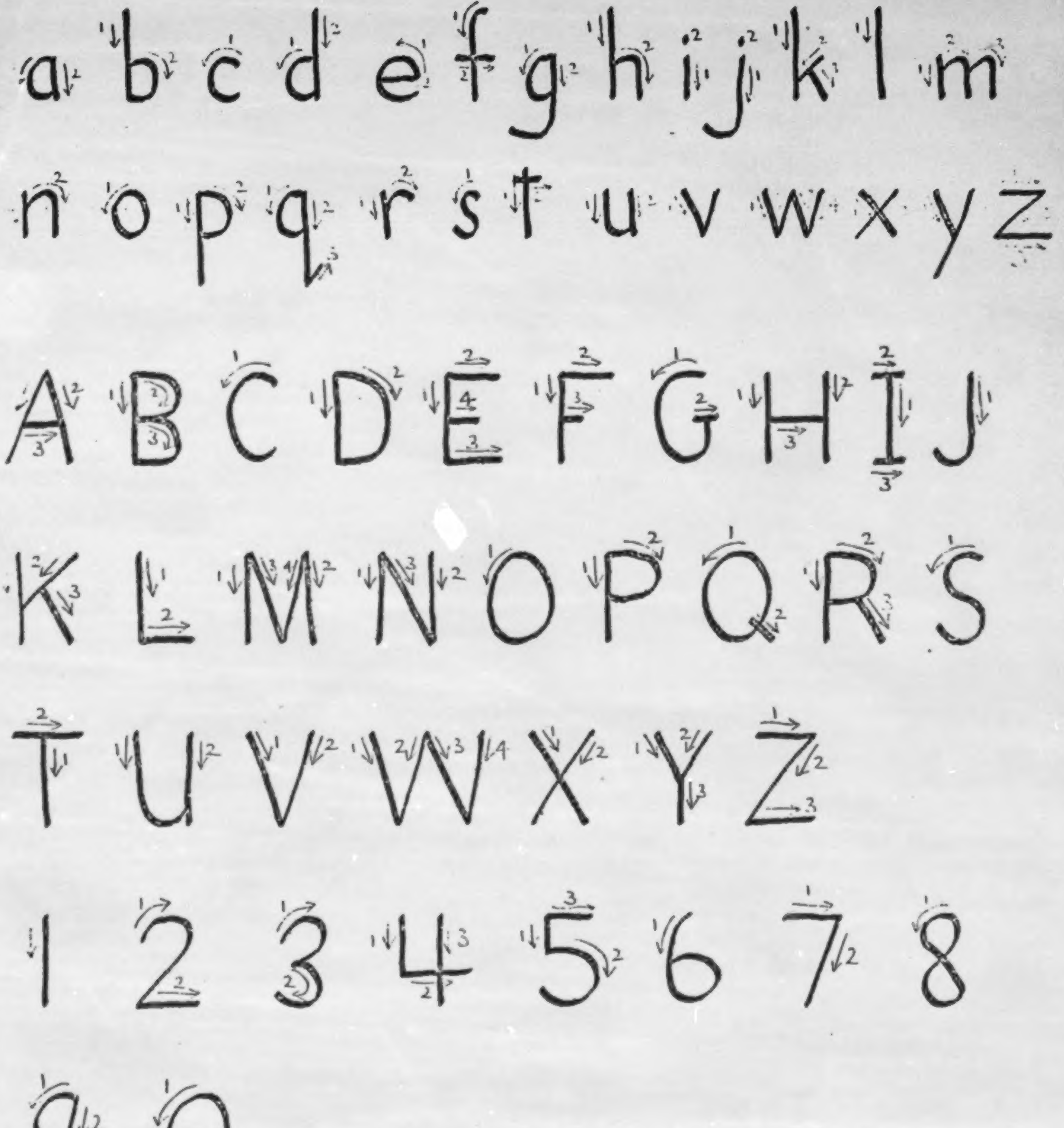
C O Q G   J U S

Lower case letters:

l t k i   v w   y x z   c a g q   o e

b d p f h j   m n r   u s

The Palmer Method for the formation of letters and numerals is included as one suggested resource the instructor may consult when teaching Skill Area #50.


a b c d e f g h i j k l m
n o p q r s t u v w x y z
A B C D E F G H I J
K L M N O P Q R S
T U V W X Y Z
1 2 3 4 5 6 7 8
9 0

Based on the Palmer Metho

SKILL AREA 50

OBJECTIVE: To write the letter t

TERMINAL BEHAVIOR: To write the letter t on one-inch square lined primary paper.

PREREQUISITES: Skill Area #4 Touch, to hold a writing utensil.

GENERAL INSTRUCTIONS:

This is a sample lesson for printing the letters of the alphabet. Use this format for each of the lower case and upper case letters, with particular stress on the ones which appear in the child's name. Extend the format to include the numerals 0 to 9. Each lesson should be repeated to reduce letter size by using primary paper and a pencil when the child can successfully complete it with newsprint and a crayon.

This lesson may be integrated with Skill Area #15 Letters of the Alphabet, and Skill Area #29 Numerals.

SETTING: A table or desk in a room with minimal distractions.

MATERIALS: Sandpaper letter t, large handprinted letter t, several pieces of newsprint, several pieces of one-inch spaced ~~square~~ lined primary paper, two crayons of different colors, two pencils. Primary paper with three colored guide lines may be helpful to some students (green line on top, yellow in the middle, red on the bottom).

TEACHING STEPS:

1. Present sandpaper t and say letter name.
2. With index finger of dominant hand extended, have child trace t several times.
3. Present printed t and say letter name.
4. Repeat Step 2.
5. Place newsprint on table or desk.
6. Make a t and say letter name.
7. Give the child a crayon.
8. Take child's dominant hand and guide him in drawing over the t several times, saying letter name.

Skill Area 50 - Teaching Steps (cont'd)

9. Make a t and say letter name.

10. Say "Trace a t over mine."

11. If the child traces the t correctly on several trials, go on to Step 12.

    If the child does not trace the t correctly, repeat Steps 1 to 10 until he is successful on several trials.

12. Make a t and say letter name.

13. Say "Make a t like mine."

14. If the child makes a t correctly on several trials, go on to Step 13.

    If the child does not make a t, repeat Steps 12 to 13 until he is successful on several trials.

15. Place a clean piece of paper on the table or desk.

16. Say "Make a t."

17. If the child makes a t correctly on several trials, go on to the next letter to be taught.

    If the child does not make a t correctly, repeat the entire lesson until he is successful on several trials.

Teacher Aids

Grolier Pre-Reading Enrichment Program
Grolier Educational Corporation
845 Third Avenue, New York, N. Y. 10022
Book 16 - Writing His Name

Milton Bradley Company
Springfield, Mass. 01101
Learn to Write Manuscript Letters #7526

Palmer Method/We Learn and Write Series
The A. M. Palmer Company
Chicago, Illinois

Trend Enterprises, Inc.
St. Paul, Minn. 55165
Wipe-Off Cards - Manuscript Alphabet #T-143

APPENDIX G: PART 1

INFORMATION RETRIEVAL SHEET

Call Sheet

Please circle the information you would like so that a complete search can be conducted. If the information you need falls into more than one category, fill out a second call sheet. Do not circle more than one call descriptor for each category.

Area in which search is to be conducted

☐ 1. Training
☐ 2. Assessment
☐ 3. Guidance

Type of program

☐ 1. Academic (reading, math, etc.)
☐ 2. Avocational (music, art, etc.)
☐ 3. Prevocational (any program leading to eventual vocational competance, including work-study programs)
☐ 4. Vocational (on job training-renumerative programs)

Population type (treatment group)

☐ 1. T.M.R. (I.Q. 20-50)
☐ 2. E.M.R. (I.Q. 51-80)
☐ 3. Other handicapped (excluding physically, but including learning disabled, emotionally disturbed, slow learners, etc.)

Population age (subjects)

☐ 1. Pre-school
☐ 2. Elementary
☐ 3. 12-15
☐ 4. 16-21
☐ 5. 22+

Environment (specific task situation

☐ 1. Public/Private Day School
☐ 2. Institution
☐ 3. Workshop/Training Center
☐ 4. Business/Industry
☐ 5. Home
☐ 6. Work-study

Other Descriptors (does not have to be completed)

Type of report: ☐ Research; ☐ position paper; ☐ critical review; ☐ program description; ☐ literature review; ☐ historical perspective; ☐ follow-up; ☐ related instructional (including curriculum guides)

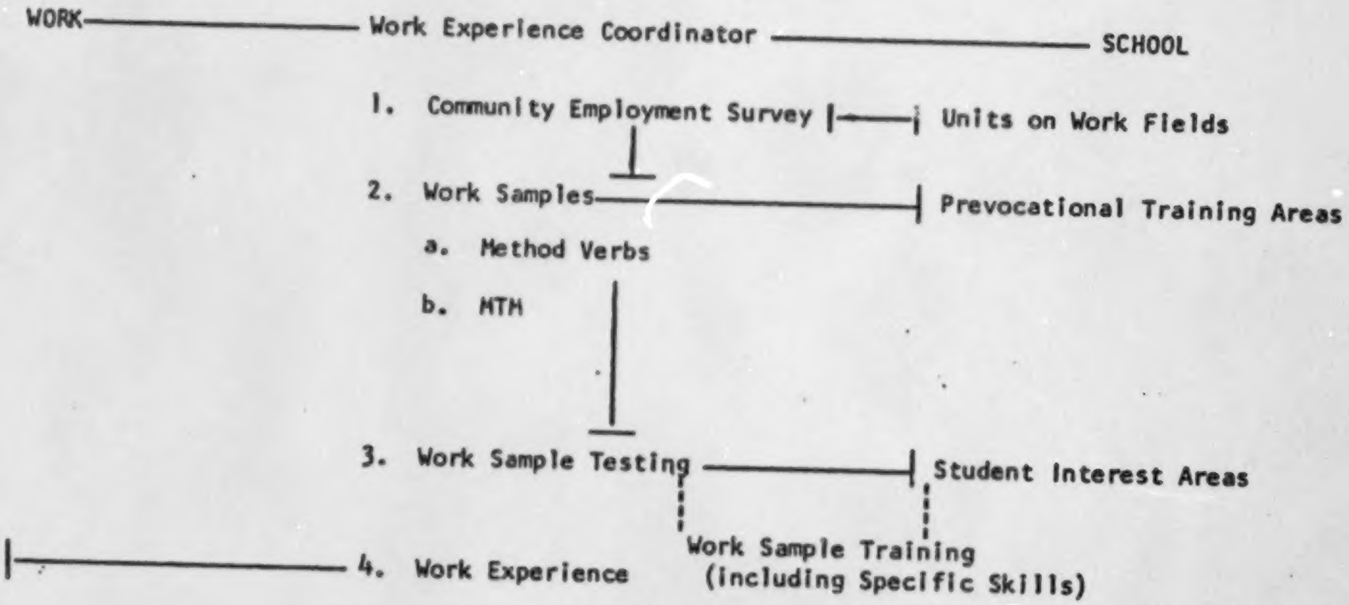
Geographic Area: ☐ inner city; ☐ urban; ☐ suburban; ☐ small town; ☐ rural

Research Design Classification: ☐ Pre-experimental; ☐ quasi-experimental; ☐ descriptive; ☐ behavior modification

APPENDIX G: PART 2

PREVOCATIONAL CURRICULUM AND TEST PROCEDURES

A MODEL FOR WORK PREPARATION


WORK
Work Experience Coordinator
SCHOOL
1. Community Employment Survey
Units on Work Fields
2. Work Samples
Prevocational Training Areas
a. Method Verbs
b. MTM
3. Work Sample Testing
Student Interest Areas
Work Sample Training
(including Specific Skills)
4. Work Experience

Project Descriptions

Completed: Training for Independence: a sequential program of daily living skills for the developmentally young. Volumes I to IV

The purpose of this curriculum is to help an instructor to train the developmentally disabled to perform basic self-care skills. It may be used in the classroom with the trainable, educable, severely or profoundly retarded child; with the emotionally disturbed or learning disabled child; in a rehabilitation center; or with a normal child who may encounter problems in these skills. Each task is analyzed into its component steps to enable its adaptation to different settings.

The curriculum is divided into four books. The first three deal with dressing skills and related areas (Book I - Underwear and Footwear, Book II - Indoor and Outdoor Clothes, Book III - Fastenings); Book IV deals with Grooming and Self-care Skills. Within the Dressing Skills books, the items of clothing are arranged in alphabetical order for ease of reference. Appendix III lists the tasks in each section in approximate order of difficulty, starting with the easiest. In Book IV, we have arranged the tasks into activities related to personal hygiene, grooming and eating.

This curriculum is a basic foundation for the more advanced skills found in the academic and pre-vocational curricula now in their research and development stages. It is, in essence, the beginning of a total curricula package that has as its optimal goal the eventual self-sufficiency of the T.M.R. child in the community.

Project Descriptions

In Development Stage: Academic Curriculum
Pre-vocational Curriculum and
Reference System

Academic Curriculum: This is a task analyzed curriculum designed to develop minimal academic (entry level) skills necessary for an individual to move into a pre-vocational training program and other academic curricula.

The basic curriculum contains four sections: General academic skills which include basic skills such as matching; Receptive language training including essential vocabulary needed to maintain minimal self-sufficiency; Handwriting training which includes minimal skills (e.g. writing one's name) needed to function independently; and number skills which include basic time telling, coinage, and sequencing tasks needed to enable the retardate to function in the community.

The curriculum is also interspersed with numerous references to other curricula the T.M.R. student may progress into if he/she completes any sequence.

Pre-vocational Curriculum and Reference System: This is a dual faceted endeavor which has been designed both as a research and teaching tool. The literature in the area of pre-vocational programming for the mentally retarded has been exhaustively reviewed and abstracted. A computer based retrieval system has been developed to allow potential users the opportunity to locate a complete annotated (full abstract) bibliography in any specific area of pre-vocational programming for the mentally retarded. Project personnel feel that this system will have a wide scope of usage with any professional (teacher, administrator, student, etc.) who is working in a pre-vocational setting with mentally retarded individuals.

The pre-vocational curriculum has its theoretical roots grounded firmly in this literature review. The curriculum is organized as a synthesis of skills that are integral in both home and industry. The major portions of the curriculum include: a task analyzed sequence of method verbs broken down into eight areas (essential, storing, bedmaking, maintainence, cleaning, washing and ironing, sewing and cooking); and the referrents of these analyses in industrial jobs. Specific jobs can thus be identified in a community and specific task training can be accomplished in the classroom.

In addition, the project is working on the application of M.T.M. (methods time measurement) to the work-school relationship. This component of the curriculum offers a unique opportunity for the educator to utilize an industrially based system both for diagnosis of specific strengths and weaknesses and as a method of training students to perform to internationally accepted standard criteria. In this way educators and employers can interact using a common language for increasing employment possibilities for the retarded.

ELECTRICAL FABRICATING-INSTALLING-REPAIRING -- 111

Fabricating, installing, and repairing objects that have electrically functioning elements, by any combination of Abrading, Bolting-Screwing, Boring, Fitting-Placing, Nailing, Riveting, Soldering, Welding, or Winding. Jobs involved with only one of these work fields are listed thereunder. Distinguish from Structural Fabricating-Installing-Repairing, Mechanical Fabricating-Installing-Repairing, Electronic Fabricating-Installing-Repairing, Elctro-Mechanical Fabricating-Installing-Repairing, and Machining.

Method Verbs

Calibrating
Charging (batteries)
Connecting
Hooking Up
Measuring
Plugging In
Stringing
Switching
Threading
Twisting
Wiring

Machines

Assembly Machine
Coil-Winding Machines
Electrode-Cleaning Machine
Power Presses
Undercutting Machine

Tools

Brushes
Cable Cutter
Electricians Knife
Handsaw
Lock-Pliers
Mallets
Power Tools, Hand
Soldering Iron
Stud-Driver
Test Probes
Wire Cutter
Wire Stripper
Wrench Sets

Equipment

Ammeter
Automatic-Testing Machines
Gas Furnace
Induction Heater Multimeter
Ohmmeter
Spot Welding Machine
Test Panels
Voltmeter

Work Aids

Blueprints
Cable Clamps
Electrical Diagrams
Fixtures
Gages
Jigs
Locator Pins
Schematic Drawings
Solderless Connectors
Steel Scale
Tape Rule
Tamplates

Plans layout, installs, and repairs wiring, electrical fixtures, apparatus, and control equipment.

Wires switchboards, operating tables, and similar telegraph apparatus.

Places color frames on lights to obtain colored effects and sets up electric equipment such as microphones, bells, or buzzers, to produce sound effects.

Spreads and seats helix coil over metal pins on assembly plate; fits together and cements asbestos strips, cores, dividers, plastic strips, and spacers to form resistor unit for use in making rheostats.

Forms single-and-half turn armature, rotor, and stator coils from bar wire by heating and bending, using template, bending fixtures, gas furnace, and handtools.

ELECTRICIAN HELPER (any ind.) 829-887. electrictrical-wireman helper; wireman helper.

Assists ELECTRICIAN to install and repair-electrical wiring, fixtures, and equipment, performing any combination of the following tasks: Measures, cuts, and bends wire and conduit, using ruler and handtools, such as pipe benders and hacksaw. Drills holes for wiring, using power drill, and power drill, and pulls or pushes wiring through opening. Assists in lifting, positioning, and fastening objects, such as wiring. conduit, and motors. Performs minor repairs, such as replacing fuses, light bulbs, and light switches, using electricians' handtools. Maintains tools and equipment and keeps supplies and parts in order. Dissassembles such defective electrical equipment as motors, using handtools. Performs other duties as described under HELPER.

TASK: To Tighten (with screwdriver)

PREPARATION AND METWA:
screwdriver, clamp, object to be tightened

SETTING:
a workbench with a bolt-in vise clamp

GENERAL INSTRUCTIONS:

1. Stress safety factors (e.g. screwdriver blade is sharp).
2. Instruct as to the various types of screwdrivers (e.g. filips head, standard head, etc.)
3. Instruct as to the various types of screws.
4. Demonstrate attachments to drill that can make a power screwdriver.

ENTRY LEVEL SKILLS:
clamping object, matching screwdriver to screw, inserting screwdriver to screw slit, turning screwdriver

METHOD VERBS:
clamping, inserting, turning, locating, placing

TASK ANALYSIS:

1. Locate object to be tightened (MTM #______ locating).
2. Place object in vise, site to be tightened facing up (MTM #______ placing).
3. Clamp object (Task #______ clamping).
4. Locate screwdrivers.
5. Choose appropriate screwdriver (see Academic Curriculum Skill Area #8 Matching).
6. Grasp appropriate screwdriver (see Volume I Underwear and Footwear Appendix V Palmar Grasp).
7. Insert screwdriver into slit of screw (Task #______ inserting).
8. Turn screwdriver clockwise (Task #______ turning).
9. Continue turning until screwdriver stops.
10. Return screwdriver to original location.

TASK: To Screw

PREPARATION AND METWA:
screws, screwdriver, object to be screwed (pre-bored)

SETTING:
work bench area

GENERAL INSTRUCTIONS:

1. Stress safety factors (e.g. screws are sharp, do not keep hands in the way).
2. Instruct as to various types of screws (metal, wood, etc.).
3. Point out the variety of situations in which screwing may be done (e.g. tightening chair legs, handles, handing fixtures, etc.).

ENTRY LEVEL SKILLS:
grasping tools, clamping object, inserting screw, inserting screwdriver, turning screwdriver, tightening screw

METHOD VERBS:
locating, clamping, inserting, turning, tightening, placing, grasping

TASK ANALYSIS:

1. Locate needed METWA (MTM #______ locating).
2. Place METWA on workbench.
3. With non-dominant hand, grasp object to be screwed (see Volume I Underwear and Footwear Appendix I:V Palmar Grasp).
4. Place object in a vise grip clamp, side to be screwed facing up (MTM #______ placing).
5. Clamp object (Task #______ clamping).
6. With non-dominant hand grasp screw under head (see Volume I Underwear and Footwear Appendix V, IV Pincer Grasp.
7. With dominant hand grasp screwdriver by the handle.
8. Insert screw into bored hole (Task #______ inserting).
9. Insert screwdriver head into screw.
10. Turn screwdriver clockwise (MTM #______ turning).
11. Tighten screw (Task #______ tightening).
12. Return materials to storage.

Pretest

Before teaching any of the household tasks, a pretest is administered to assess the student's present ability level. The pretest can indicate that the student performs the task successfully, possesses enroute abilities, or lacks prerequisite skills. This information then can be used to individualize an actual teaching unit.

Many of the pretests contain more than one phase. This procedure is necessary because some of the tasks are potentially injurious if performed improperly. For instance, rather than risking the chance of an electrical shock, changing a wall switch is first assessed with the switchbox sitting on a worktable (Pretest 1A). Then, changing the switch is assessed with the wall box connected to a dead electrical line (Pretest 2) and, after the student can use the circuit breaker, with the wall box connected to a live circuit (Pretest 3).

The pretest format also can serve as a posttest. The two formats need differ only if the examiner desires to forgo a more elemental phase of a task, e.g., Pretest 1, and administer a more advanced stage, e.g., Pretest 3. However, the examiner must be reasonably certain that the student has competence in any step(s) of the more elemental task that is not directly assessed in the more advanced posttest.

Pretest for Wall Switch, Rheostat, Wall Outlet

Each pretest has a test format sheet and a student data sheet. The same test format and data sheets are appropriate for all three electrical items. The format sheet contains test instructions, the METWA (Materials, Equipment, Tools, Work Aids) needed and the steps used to test the electrical apparatus. The student data sheet contains the concept areas, the method verbs, the MTM (Method-Times Measurement) motions, and the decision points included in the test procedure. The key operation or motions for each step and space to indicate if these actions were successfully performed are also provided. By indicating if a step or its substeps were performed successfully or unsuccessfully and by writing comments where needed, the tester has useful information that can facilitate individualized remediation of deficient concepts. In addition, each method verb, MTM motion, and decision point has a reference number. Referring to the verb number in the Household Task Unit (H.T.U.) will provide the teacher with a task analysis of that specific verb or motion. After the student learns to perform the actions of the verb or MTM motion, he can again be tested.

When administering the pretests, the examiner should simply tell the student to perform the (entire) task rather than its individual steps, e.g., "Remove the wall switch from the wall." This procedure is necessary in order to assess the student's competence separate from outside prompting. As each step of the pretest is performed, the examiner indicates such on the student data sheet.

The student should successfully complete each step in Pretest

1A or 1B for an apparatus prior to being tested on Pretest 2A or 2B. The same steps used in Pretest 2A (Disassembly) and 2B (Assembly) are also appropriate for Pretests 3A and 3B. However, Pretest 3 should not be administered until after the student has successfully completed the pretest for circuit breaker. The Pretest format for Pretest 1 differs from that of the other two because Pretest 1 is performed on a work table.

APPENDIX H

BROCHURE AND LETTERS TO INTERMEDIATE UNITS

TRAINABLE
MENTALLY
RETARDED
PROGRAM

Self-Care·Academic·Prevocational

Curricular Reorganization of Trainable Mentally Retarded Classes

SPECIAL EDUCATION CENTER
1605 B WEST MAIN STREET
NORRISTOWN, PENNSYLVANIA 19401
TELEPHONE (215) 539-8550

SPECIAL EDUCATION CENTER
1605 B West Main Street
Norristown, Pennsylvania 19401

FIRST CLASS
PERMIT NO.
807
Norristown, Pa.

FIRST CLASS
PERMIT NO.
1150
Norristown, Pa.

BUSINESS REPLY MAIL
No postage necessary if mailed in the United States

POSTAGE WILL BE PAID BY

CURRICULAR REORGANIZATION OF TMR CLASSES
SPECIAL EDUCATION CENTER
1605 B WEST MAIN STREET
NORRISTOWN, PENNSYLVANIA 19401

OUTLINE

"Curricular Reorganization of Trainable Mentally Retarded Class" is a federally funded Title III Project, sponsored by Montgomery County Intermediate Unit in Blue Bell, Pennsylvania. It is an instructional program designed to teach lower functioning mentally retarded students and it is based on criterion-referenced measurement. It is divided into the areas of daily living, academic, and prevocational skills. By the summer of 1974, the following have been completed and field-tested: dressing and undressing, fastening and unfastening, washing different parts of the body, applying deodorant and make-up, general grooming, toileting, eating, drinking and feminine hygiene.

A manual accompanies the programs. Although it was written with the trainable mentally retarded (IQ 25-55) child in mind, it can be used in many situations: with any child who is having difficulty mastering such skills; with the educable or severely retarded child; with the emotionally disturbed and learning disabled child; or with the patient in a rehabilitation hospital. The people who would use this curriculum include teachers and parents of handicapped people, physiotherapists, departments of special education in universities and colleges, and child-care workers in mental institutions and half-way houses.

CURRICULUM

In each skill area of the curriculum, complete detailed directions are given to the instructor. The directions include necessary and suggested preparation, individual steps for teaching a specific skill, the order for teaching those steps, instructional suggestions and recording procedures.

The curriculum is based on a series of tests which pinpoint what the student can and cannot master. The first test (the screening test) is a one-item test to discover if the student can do the gross activity (e.g., can he put on a sock?). If the student succeeds, he is given a screening test in another area. If he fails, he is given a test to discover if he has the necessary prerequisite skills for that task (e.g., can he grasp in a pincer grasp?). If he lacks these requirements, he is not yet ready to enter the curriculum and must be trained. To this end, the teacher is given a list of materials and manipulative devices to help her instruct, but no detailed instruction is given in these areas.

When the student is ready to be taught a specific skill, he is given a pretest. This is a multi-item inventory to find out which of the small steps of the gross activity he can master (e.g., He may not be able to put his toes into the toe of the sock, but he may be able to pull the sock up past his ankle; the teacher knows she must teach him only the step he cannot master). She then consults the instructional area (the specific objectives); here she is given detailed, one-action instructions in teaching the necessary step (e.g., "Grasp the cuff of the sock with the left hand, thumb to the inside"). These steps are taught and practiced many times until the teacher feels that the student is able to perform successfully. He is then given a posttest to find out if he can put all the small steps together. A retention test is given a few weeks later to determine if he has retained mastery of the skill.

This curriculum has been field-tested successfully in one TMR class for two years and in five TMR classes for one year. The settings have included public school elementary classes in a middle income neighborhood and low functioning, multi-aged, institutionalized children from a wide variety of socioeconomic backgrounds.

I AM INTERESTED IN A COPY OF YOUR SELF CARE VOLUME FOR TMR STUDENTS.

NAME __________

ADDRESS __________

__________ ZIP __________

TELEPHONE __________

SCHOOL DISTRICT __________

NAME OF SCHOOL __________

ADDRESS OF SCHOOL __________

RANGE OF AGES OF STUDENTS __________

NUMBER OF TMR CLASSES IN SCHOOL DISTRICT __________

CURRICULAR REORGANIZATION OF TRAINABLE MENTALLY RETARDED CLASSES
Montgomery County Intermediate Unit
Dennis Harken, Executive Director
SPECIAL EDUCATION CENTER
1605 B WEST MAIN STREET
NORRISTOWN, PENNSYLVANIA 19401
TELEPHONE (215) 539-8550

Project Director: ROBERT M. BURGER
Research Director: SHEILA M. BUCKLEY

Director of Special Education and Principal Investigator: LESTER MANN

Dear Educator:

Each child has a right to develop his full potential, whatever his handicaps. Recent developments in legislation and in the expectations of educators have removed some of the obstacles frequently encountered by retarded citizens in achieving an independent and rewarding way of life. Accompanying an influx of handicapped into public schools was the need for innovative programming designed to recognize their needs.

The staff of this Title III Project has been working for the past three years on developing such programming in the areas of self-help skills, basic academics and prevocational skills. Initial research indicated that such a program should have the following characteristics: presentation of the complete task in terms of component elements through task analysis; the individualization of instruction; the homogeneous grouping of students; the effective use of limited instructional personnel; and continuous accurate monitoring of students' progress. A danger of such a program would be to force the teacher into a highly structured situation while limiting her input. We sincerely feel that the program we are enclosing, fulfills the above characteristics while allowing the teacher the flexibility to use the experience and abilities which she brings to her classroom. This program can be used to develop the daily living skills of the mentally retarded, the physically handicapped, the learning disabled, normal children with a developmental lag, as well as patients in rehabilitation centers.

All phases of the program represent a close working relationship between project staff and teachers of the trainable mentally retarded in Montgomery County. During the field-testing of this material, it became quite evident that the program could be used with a great deal of success in classes for the trainable mentally retarded; however, your use of the project will depend on individual needs. Our principal hope is that this program will be used and not discarded. Montgomery County Intermediate Unit and the project staff welcome any feedback which you would have concerning the program which would increase the effectiveness of this program for the teacher. We look forward to your response.

Sincerely yours,

Robert M. Burger
Project Director

Sheila M. Buckley
Research Associate

Lester Mann
Principal Investigator

A MODEL FOR T.M.R. EMPLOYMENT
SPECIAL EDUCATION CENTER
1605 B WEST MAIN STREET
NORRISTOWN, PENNSYLVANIA 19401
TELEPHONE (215) 539-8550

DIRECTOR: ROBERT M. BURGER
TECHNICAL ADVISER: EDMUND J. COOMBE

Dear Educator:

Our primary interest over the past three years has been to develop an easy to use, self-contained program which would provide the retarded citizen with meaningful skills. Although we believe the present form of the program can be of great value to the teacher and student, we feel that review by professionals working in a variety of situations will form the basis for continued improvement of the program.

We are currently developing and field-testing curricula on basic preacademic and academic skills, social and prevocational skills, in order to help the trainable mentally retarded citizen adjust to an independent and fulfilling life after he leaves the school environment. We are looking for interested educators who may wish to become contributors to a research component in these areas. They would be asked to provide pretest data and some student identifying data (e.g. chronological and mental ages, I.Q., socioeconomic background) at the beginning of the school year; and posttest and retention test data at the end of the school year. Even if this were not possible, your suggestions for additions, deletions and corrections would be welcomed.

If you should volunteer data resulting from your use of the program, it would not be necessary to identify the individual on whom measures were taken or to identify personnel responsible for the individual training. Be assured that this information will be held in strictest confidence and reported in a manner consistent with current recommendations of the American Psychological Association. Receipt of the program places you under absolutely no obligation to provide such data.

If you should decide to participate with Project staff in an ongoing validation effort, please provide the information at the end of this letter and return it at your earliest convenience.

Sincerely yours,

Robert M. Burger
Project Director

Sheila M. Buckley
Research Associate

Lester Mann
Principal Investigator

. . . .

Name:
Position:
Organization:
Address:
Telephone number:

I would be interested in participating in the data collection aspects of validation of the Self-care Curriculum, "Training for Independence". _____ Yes _____ No

I would be interested in offering suggestions for additions, deletions and improvement of the Self-care Curriculum, "Training for Independence". _____ Yes _____ No

APPENDIX I

LOCATIONS OF TMR CHILDREN THROUGHOUT THE COMMONWEALTH OF PENNSYLVANIA

Pr. I

IU	Number of Trainable Children Ages 16-21 In Public School System	Number of Trainables Ages 16-21 Attending Sheltered Workshops	Names & Addresses of Sheltered Workshops
1	61	18	Washington Chapter of PARC Industrial Workshop Box 385 Washington, Pa. PARC Workshop Meadow Lands, Pa. 15347 Goodwill Industries of Fayette County Workshop for the Handicapped 333 Pennsylvania Avenue Uniontown, Pa.
2			
3	181	0	East Hills Opportunity Center 630 Ardmore Boulevard Pittsburgh, Pa. 15226 South Hills Opportunity Center 1930 West Liberty Avenue Pittsburgh, Pa. 15226 Fisth, 1001 Brighton Road Pittsburgh, Pa. 15233 North Hills Opportunity Center 200 Lincoln Avenue Pittsburgh, Pa. 15209 South Park Opportunity Center 5301 Park Avenue Bethel Park, Pa. 15102 Pioneer Industries 917 Brighton Road Pittsburgh, Pa. 15233
4	IU 36 District 15	0	Mercer County Training Center and Workshop 850 North Hermitage Road Sharon, Pa. Butler County Workshop 200 West Jefferson Street Butler, Pa. 16001 Lark Workshop, Lawrence County 210 West Washington Street New Castle, Pa. 16101

5	IU 41 District 39	0	Gertrude Barber Center 136 East Avenue Erie, Pa. Warren County PARC Warren, Pa. Vallonia Industries 215 Arch Street Meadville, Pa. 16335
6	68 State Schools and Hospitals 23 IU	22	Goodwill Industries 24 North Washington St. Dubois, Pa. 15825 Goodwill Industries Highway 322 Franklin, Pa. 16323
7	IU 88	12	Rehabilitation Center and Sheltered Workshop 952 Highland Avenue Greensburg, Pa. 15601 Sattelite New Kingston, Pa. Goodwill Industries 1068 Fifth Avenue New Kingston, Pa.
8	IU 89 District 16	0	General Industries and Vocational Services for the Handicapped 1902 Eighth Avenue Altoona, Pa. 16601 Goodwill Industries 944 Ash Street Johnstown, Pa. 15902 Sheltered Workshop Somerset, Pa. 15501

9	14 IU 10 District	3 4	Futures Inc. Sheltered Workshop Southeast and Maple Street Coudersport, Pa. 16915 Futures Inc. 49 East Main Street Bradford, Pa. 16701
10	20	2 1 on work experience	Skills Inc. 310 North Allegheny Belfont, Pa.
11	26	9	Huntington Developmental Workshop Penn Street Huntington, Pa. Skills of Central Pa., Inc. 50 Valley Street Lewistown, Pa.

12	112	0	Adams Hanover Sheltered Workshop Rear 257 North Fourth Street Gettysburg, Pa. Adams Hanover Sheltered Workshop 835 York Street Hanover, Pa. Satellite Waynesboro, Pa. Occupational Services, Inc. 17 Redwood Street Chambersburg, Pa. Sheltered Workshop of York County 149 South Tremont St. York, Pa.
13	75	23	Labanon County Workshop Birch Road and Metro Drive Lebanon, Pa. 17042 Goodwill Industries 1048 North Plumb Street Lancaster, Pa. 17601
14	76	20	Threshold Fourth and Penn Streets Reading, Pa. Association for Retarded Children Wyomissing, Pa.
15	77	14	Goodwill Industries 1829 North Front Street Harrisburg, Pa. Industries Limited 100 West Louther Street Carlisle, Pa.

16		17	Sun Con Route 61 Sunbury, Pa. VAS Sheltered Workshop Laurelton, Pa.
17	49 IU 13 District	15 IU 5 District	Partners for Progress Water Street Wellesboro, Pa. Serve, Inc., Wysox, Pa. Penn York Opportunities Athens, Pa. Hope Enterprises Catowisa Avenue Williamsport, Pa.
18	Iu 42 District 27	0	United Rehabilitation Services Union Street Wilkes-Barre, Pa.
19	70 IU 14 District	14	Allied Services for Handicapped 475 Morgan Highway Scranton, Pa. 18508

20	IU 50 District 2	0	Burnley Monroe County Kurtz Training Center
21	37 IU 9 District	4	Good Shephard Workshop Sixth and St. John Street Allentown, Pa. Carbon County Association for Retarded Children Lehighton, Pa. Carbon County Association for Retarded Children Jim Thorpe, Pa. Lehigh Valley Association for Retarded Children Kurtz Training Center Bethlehem, Pa.
22	60	0	Bucks Co. Association for Retarded Children, Church Street Sellersville, Pa. 18960 Bucks Co. Assoc. for the Blind Route 413 Newtown, Pa. 18940 Bucks Co. Assoc. for Retarded Child. 20 West Oakland Avenue Doylestown, Pa. 18901 Bucks Co. Assoc. for Retarded Child. State and Emmilie Road Croydon, Pa. 19020

23	150	69	Norristown Training Center 600 Markley St., Norristown, Pa. Pottstown Training Center 950 High St., Pottstown, Pa. North Wales Training Center Elm & Pa. Ave., North Wales, Pa. Huntington Valley Training Center 2595 Murray Rd., Huntington, Pa. Wynnewood Training Center 444 Lancaster Avenue Wynnewood, Pa. Goodwill Industries, Inc. 1617 Easton Rd., Willow Grove, Pa.
24	50	14	Lansdowne Workshop 147 South Lansdowne Avenue Lansdowne, Pennsylvania 19050 Havertown Workshop Darby Road & Lansdowne Avenue Havertown, Pa. 19083 Chester-Upland Workshop Upland Shopping Center 24th and Upland Avenue Upland, Pa. 19015 Upper Darby
25	22 School District 55 IU	25	Lansdown Sheltered Workshop Lansdown & Bareview Ave. Lansdown, Pa. 19050 Elwyn Sheltered Workshop Elwyn Rd., Elwyn, Pa. 19063 Upland Sheltered Workshop Shopping Center, Upland Avenue Upland, Pa. 19015 Havertown Sheltered Workshop West Chester Pike Lansdown Avenue Havertown, Pa. 19083

26	350	300	Muhr Sheltered Workshop 122 Allegheny Street Philadelphia, Pa. Bartlet Sheltered Workshop 112 Catherine Street Philadelphia, Pa. Brooks 572 Haverford Road Philadelphia, Pa. Spruance Levick and Horrocks Philadelphia, Pa.
27	36	24	Beaver County Rehabilitation Center 1445 Market Street Bridgewater, Pa. 15009
28	35	13	Sheltered Workshop of Armstrong County 301 Oak Avenue Kittanning, Pa. 16221 Sheltered Workshop of Indiana County, Inc. 1200 School Street Indiana, Pa. 15701
29	15	0	Habilitation, Inc. West Market Street Pottsville, Pa.

APPENDIX J

THE FOLLOW-UP PROJECT TO THE PRESENT ONE: " A MODEL FOR T.M.R. EMPLOYMENT:

At the time of Right to Education little formal programing had been developed for TMR students. Certainly no curriculum existed which provided teachers with a training sequence covering all years of obligatory education. To this end since 1973 the Project staff has developed a system of criterion-referenced measurement and associated curriculum in the areas of Self-care and academics. Currently, the five volumes of the curriculum have been printed at the request of the State Department of Education (Bureau of Special and Compensatory Education).

Following program development in these areas the State Department awarded Montgomery County Intermediate Unit a grant to develop an in-service capacity in the area of vocational education for TMR students. The concerns of the State Department were: goals and activities of educators responsible for vocational programing had become fragmented, or in fact, were nonexistent; no vehicle for communication between vocational educators existed; lower-functioning retarded students were not being prepared for competitive employment; there was little purposeful continuity between vocational preparation and other aspects of curriculum development with districts across the Commonwealth; the instruments for assessment of vocational skills were not generally referenced to instructional strategies. It was the purpose of the project to deal with these concerns on a statewide basis.

The project began with an exhaustive search of the literature in the areas of prevocational training, assessment, and guidance. This search revealed some common types of programing for vocational preparation of both handicapped and normal students. In the training area much current work is being done in the area of job clusters (e.g., how training in one area may have applicability in many other occupations). In the areas of assessment and guidance the literature reveals a marked trend toward the use of work sampling procedures and interest inventories to serve as indicators of abilities in various work or occupational areas and their relationship to the student's interests. In the case of normal students, regular and vocational technical schooling has been shown to be the best means to achieve vocational success. However, in the case of the handicapped the same situation is not apparently true. The vocational preparation program models which have evolved for the mentally handicapped have almost universally used a work-study model which involves primarily EMR students spending a portion of their school hours, during the last one or two years of schooling, on job training sites. Increasingly work sampling and interest inventories have been utilized to match students with jobs. The TMR students, however, have not, for the most part participated in this or any other type of program.

With the aforementioned State Department concerns in mind the following summary of findings, is intended to speak to the Project's use of Methods-Time Measurement (MTM) in a program for amelioration of this educational deficit. Regarding fragmented goals and activities of Educators of TMR, MTM provides; a methodology for job analysis; the identification of specific movements which serve as elements of vocational skills; a vehicle to design activities to develop student skills on meaningful sequences of elements. Success to a criterion on these activities would then place the student in a competitive position for employment on a job which utilizes that sequence of skills.

Regarding the need for a vehicle of communication, obviously in order for communication to take place educators should share a common background of experience. Pennsylvania is a large and populus state encompassing the full range of such variant factors as: socioeconomic levels, population density, industrial concentration, and topography. This range will be reflected in the variety of experiences of educators within and between Intermediate Units. Thus, training must provide the basis for communication. MTM provides a language which each educator can use to deal with vocational habilitation unique to his own geographic area. Yet knowledge of MTM concepts also allows the educator to understand and deal with vocational educators working in an entirely different setting. Potentially, the greatest benefit of MTM is that it allows communication between education, and private enterprise and labor organizations. If retarded students are to find competitive employment, jobs must be identified for which they could qualify; appropriate training should then prepare them to do the job; and most importantly, industry must hire them, and they must perform well enough to be a valuable asset to the organization.

Regarding curriculum continuity, assessment, and competitive employment preparation, the educator involved in training for independence which can lead to vocational placement can begin in the early stages of public education. Using MTM, tasks appropriate to needs of the student at a given age can be analyzed and criterion levels noted. The complexity and nature of the task would change as the student progressed through school. Eventually the student would become involved with sequences of tasks that simulated elements of an actual job in industry. Constant assessment against a research-derived criterion is possible using MTM. Through this assessment it would be possible to guide the student toward a position in which he could be successful and to determine when he is ready to compete for that position.

APPENDIX K

DESCRIPTION OF NEW FEDERAL PROJECT: "OUTREACH IN-SERVICE TRAINING PROGRAM"

HAPPENINGS/PROGRAMS: PENNSYLVANIA

Consortium Outreach Inservice Training Program: Harrisburg

The conventional approach to inservice training programs, i.e., the one- or two-day inservice workshop, has a number of weaknesses: the difficulty of measuring competency gain, the lack of comprehensive instruction in a specific curricular area, the lack of direct classroom followup, and the frequently poor coordination of lecture and demonstration. Although these problems affect all areas of education, specific inservice needs for teachers of the handicapped have often been either neglected or, at best, given only minimal attention.

The Department of Education, Division of Special Education, recognized the need to develop inservice education for those teachers whose specialty areas and geographic location have precluded their receiving a comprehensive inservice program. A major weakness identified through a Division survey was the inservice training of teachers of secondary trainable mentally retarded in the areas of vocational and social education. To meet this need, the state supervisor of programs for the TMR in the Division of Special Education, with project staff from the "TMR Work Training Model" presently in operation in Montgomery County, developed a proposal utilizing federal monies and local inservice funds from seven rural intermediate units, IUs 8, 9, 10, 11, 16, 17, and 19. The resulting Outreach Training Models project attempts to bridge the gap between curriculum development and practical application in the classroom. Intensive inservice training will be done in the seven cooperating intermediate units to enable teachers, supervisors, work study coordinators, and industry to cooperate in placing TMR students in a variety of work situations ranging from sheltered workshop placement to community employment.

Training will be specific to each cooperating intermediate unit, although a number of organizational procedures have been suggested: (a) *Cooperating IU Model:* This entails an intensive 10-week inservice in which two or three IUs would plan together the program. One IU would be selected as the host, with the others sending participants for an afternoon inservice for teachers, supervisors, and work study coordinators held once a week for 3 hours. (b) *After School Model:* This involves an intensive 10-week inservice with meetings of 3 hours per week after school hours. (c) *Outreach Model:* This involves 4 full days of inservice training, either blocked or spread out across annual inservice days. This model would be geared primarily to classroom teachers. (d) *Release Time Model:* This involves an intensive 10-week inservice, with meetings of 3 hours per week during school hours, available to any IU personnel who are released for training. (e) *Supervisory Class Model:* This also involves an intensive 10-week inservice, 3 hours per week, for supervisors and administrators responsible for inservice dissemination to teachers in their respective counties.

This is not an exhaustive list of options open to intermediate units. Specific training arrangements will be developed if an IU feels a need to develop an alternative model. The selected IU directors of special education and supervisors of TMR programs have met to determine which inservice modules would meet their needs. Each IU had the opportunity to choose between 15 and 45 clock hours of inservice education which convert to between 1 to 3 inservice credit hours. These credit hours will then be applied to completion of permanent certification as required by the State of Pennsylvania. All inservice modules as developed are competency based, with pre- post measures (both written and observatory) to measure gain in teacher competence, and overall change in attitude towards the TMR. For more information contact Philip I. Matilsky, Project Director, IU 10.

PRISE reporter

no. 7, september 1975

pennsylvania resources and information center for special education 443 South Gulph Road, King of Prussia, Pa. 19406, 215-265-7321

JOHN C. PITTENGER Secretary of Education,
Department of Education, Commonwealth of Pennsylvania

DR. WILLIAM F. OHRTMAN - Chief, Division of Special Education,
Department of Education, Commonwealth of Pennsylvania